

REPORT
OF THE
STATE ROADS COMMISSION
OF MARYLAND

OPERATING REPORT
FOR THE FISCAL YEARS
1957-1958

FINANCIAL REPORT
FOR THE FISCAL YEARS
1957-1958

A HISTORY OF ROAD BUILDING IN MARYLAND

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BALTIMORE, MARYLAND

December 15, 1958



Baltimore Beltway, showing interchanges at the Baltimore-Harrisburg Expressway, the extension of Charles Street, York Road, and Dulancy Valley Road. The Beltway is now extended east of the Dulancy Valley Road.

**OFFICE OF THE STATE ROADS COMMISSION
OF MARYLAND**

108 EAST LEXINGTON STREET
BALTIMORE, MARYLAND

To His Excellency, Theodore R. McKeldin, Governor of Maryland:

SIR:

We have the honor to submit an operating and financial report covering the activities of the State Roads Commission of Maryland for the fiscal years 1957-1958.

Included in the latter half of this volume is "A History of Road Building in Maryland" which has been prepared to commemorate the first fifty years of this agency's responsibility for the development and maintenance of Maryland's highway system.

Respectfully,

ROBERT O. BONNELL

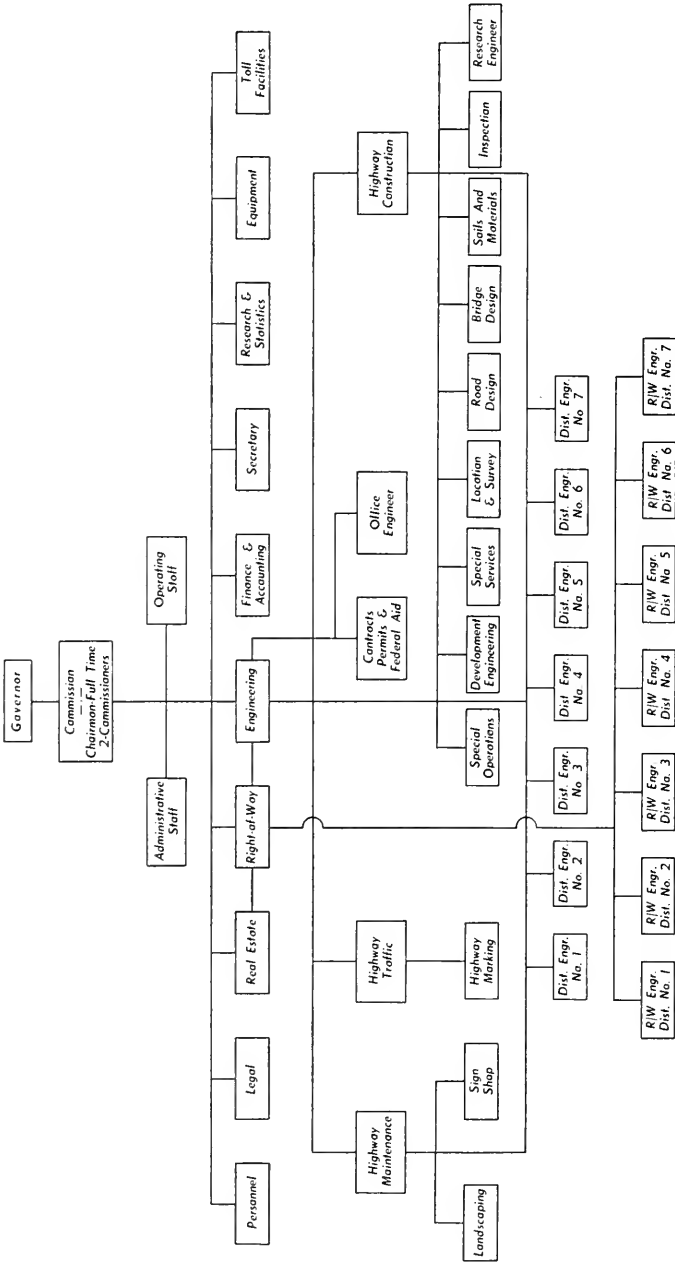
EDGAR T. BENNETT

JOHN J. MCMULLEN

State Roads Commission

Date: December 15, 1958.

ORGANIZATION CHART OF STATE ROADS COMMISSION OF MARYLAND



STATE ROADS COMMISSION

MEMBERS

ROBERT O. BONNELL, *Chairman*
EDGAR T. BENNETT, *Member* JOHN J. McMULLEN, *Member*
CHARLES R. PEASE, *Secretary*
ALBERT S. GORDON, *Executive Assistant to Chairman*

ORGANIZATION PERSONNEL

Engineering Department

NORMAN M. PRITCHETT, *Chief Engineer*
WALTER C. HOPKINS, *Deputy Chief Engineer*
P. A. MORISON, *Director of Highway Maintenance*
CORDT A. GOLDEISEN, *Director of Highway Construction*

S. W. BAUMILLER

Landscape Engineer

CLARENCE W. CLAWSON

Engineer of Road Design

A. F. DI DOMENICO

Office Engineer

HUGH G. DOWNS

Engineer of Special Services

FRANK V. DREYER

Chief Location Engineer

WARREN B. DUCKETT

Construction Engineer

ALBERT L. GRUBB

Chief—Bureau of Bridges

J. ELDRIDGE WOOD, *Chief—Bureau of Soils and Materials*

ROLAND E. JONES

Assistant to Chief Engineer

TRUMAN A. KEENEY

Equipment Engineer

ALLAN LEE

Research Engineer

GEORGE N. LEWIS, JR.

Director—Traffic Division

LEROY C. MOSER

Right of Way Engineer

FRANK P. SCRIVENER

Maintenance Engineer

AUSTIN F. SHURE

Assistant to Chief Engineer

District Engineers

DISTRICT No. 1—C. ALBERT SKIRVEN, *Salisbury, Maryland*

DISTRICT No. 2—ROLPH TOWNSHEND, *Chestertown, Maryland*

DISTRICT No. 3—LISLE E. MCCARL, *Laurel, Maryland*

DISTRICT No. 4—ENOCH C. CHANEY, *Reisterstown, Maryland*

DISTRICT No. 5—E. G. DUNCAN, *Upper Marlboro, Maryland*

DISTRICT No. 6—G. BATES CHAIRES, *Cumberland, Maryland*

DISTRICT No. 7—THOMAS G. MOHLER, *Frederick, Maryland*

Accounting Department

CARL L. WANNEN, *Comptroller*

MORRIS M. BRODSKY

Assistant Comptroller—

General Accounting

JAMES W. ROUNTREE, JR.

Assistant Comptroller—

Procedures and Controls

CHARLES I. NORRIS, *Assistant Comptroller—Budgets and Costs*

Legal Department

JOSEPH D. BUSCHER, *Special Assistant Attorney General*

Personnel, Pension, and Workmen's Compensation Division

WILLIAM F. BENDER, *Director of Personnel*

Public Relations Division

CHARLES T. LE VINESS, *Director*

Toll Facilities Department

LOUIS J. O'DONNELL, *Chief Administrative Officer*

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Roadways making up the south approach to the Baltimore Harbor Tunnel.

REPORT OF CHIEF ENGINEER

TO THE HONORABLE CHAIRMAN AND
MEMBERS OF THE STATE ROADS COMMISSION:

Submitted herewith is the biennial report of the Chief Engineer covering the period from July 1, 1956 to June 30, 1958. This report is accompanied by the reports of the various Bureau Heads and District Engineers. These reports, with supporting data, give a detailed picture of the accomplishments of the Engineering Division during the past two fiscal years.

One of the outstanding projects initiated and completed during this biennium was an extensive engineering review, analysis and study of every mile of road in the State highway system. Numerical evaluations—"Sufficiency Ratings"—were prepared for each section, following which a second, objective review of every mile of highway was made in the field. Following this review, the data obtained were compiled in tabular form, and estimates prepared, reflecting current construction and right of way costs for projects in the Twelve Year Program remaining to be initiated, and additional projects recommended for inclusion in an over-all program. It is believed that the data obtained reflect a sound approach to the problems inherent in design, traffic safety and State highway needs.

From the inception of the Twelve Year Program to the end of the fiscal year at June 30, 1958, contracts covering 903.14 miles had been awarded, at an authorized expenditure of \$246,496,034. In addition, contracts were advertised with award pending, for 42.90 miles, estimated to cost \$16,223,000. There were authorized, in addition, for surveys, plans and right of way acquisition on projects that had not been awarded, the sum of \$33,070,714.

The following table shows the distribution, by county and by system of the work covered by these authorizations.

TWELVE YEAR PROGRAM AS OF JUNE 30, 1958

COUNTY	CONTRACTS AWARDED						CONTRACTS NOT AWARDED						GRAND TOTAL					
	PRIMARY SYSTEM			SECONDARY SYSTEM			PRIMARY SYSTEM			SECONDARY SYSTEM								
	Miles		Authorized Cost	Miles		Authorized Cost	Miles		Authorized Cost	Miles		Authorized Cost						
	M.L.L.	M.L.L.		Main Line	Ramps Etc.		Main Line	Ramps Etc.		Main Line	Ramps Etc.							
Allegany.....	16.91	\$ 8,559,513	9.70	\$ 2,912,028	26.64	\$ 11,165,571	—	\$ 1,656,139	16.91	—	\$ 10,209,682	9.70	—	\$ 2,982,001	0.98	\$ 150,000	27.62	\$ 13,311,686
Anne Arundel.....	39.29	14,286,478	29.17	1,062,711	68.67	15,349,189	—	632,106	39.29	9.76	14,918,584	29.17	—	1,221,508	2.67	162,000	71.34	16,305,092
Baltimore.....	33.75	35,883,176	21.75	7,103,254	55.50	43,286,430	—	6,091,392	33.75	18.36	41,977,478	21.75	3.45	7,671,716	1.83	733,000	57.33	50,385,224
Calvert.....	11.91	1,378,916	13.56	818,362	28.47	2,197,878	—	15,993	14.91	—	1,421,909	13.56	—	858,732	—	—	28.47	2,283,611
Caroline.....	16.41	1,739,201	25.17	1,783,309	41.88	3,522,513	—	16,486	16.11	—	1,755,600	25.17	—	1,874,362	—	—	11.88	3,630,052
Carroll.....	22.77	3,071,357	17.18	4,192,228	39.95	7,263,585	—	66,791	22.77	—	3,411,148	17.18	—	4,512,310	—	—	39.95	7,653,458
Cecil.....	10.46	1,586,817	21.78	3,655,722	32.24	5,242,539	—	1,231,392	10.46	—	2,818,119	21.78	—	3,834,517	—	—	32.24	6,682,666
Charles.....	30.22	2,819,568	33.11	3,276,438	63.33	6,096,036	—	111,600	30.22	—	2,961,198	33.11	—	3,563,997	10.59	1,118,000	73.92	7,913,105
Dorchester.....	3.45	481,674	15.04	2,359,668	18.49	2,841,342	—	—	3.45	—	481,674	15.04	—	2,442,973	—	—	18.49	2,894,647
Frederick.....	28.61	10,801,014	11.60	1,978,117	40.24	12,779,131	—	552,601	28.61	11.20	11,353,615	11.60	—	2,137,972	—	—	10.21	13,491,587
Garret.....	15.50	3,321,050	15.98	1,334,319	31.48	7,658,399	—	128,510	15.50	—	3,452,560	15.98	—	4,387,921	—	—	31.48	7,840,481
Harford.....	8.69	1,899,033	18.62	3,160,608	27.31	5,059,641	—	1,300,351	8.69	—	3,199,387	18.62	—	3,815,389	4.06	876,000	31.37	7,809,776
Howard.....	11.71	1,388,174	9.49	1,097,265	21.20	2,485,439	—	1,645	11.71	—	1,389,789	9.49	—	1,408,465	3.55	810,000	24.75	3,638,254
Kent.....	14.80	3,429,193	12.68	811,401	27.48	4,271,094	—	—	14.80	6.57	3,429,193	12.68	—	862,816	—	—	27.48	4,292,009
Montgomery.....	13.40	29,625,034	21.57	3,853,201	64.97	33,478,235	—	6,810,468	13.40	3.85	36,435,502	21.57	—	4,413,614	4.77	3,713,000	69.74	44,592,116
Prince George's.....	42.06	21,208,079	18.59	10,718,919	60.65	31,926,998	—	5,273,715	42.06	9.47	26,486,794	18.59	2.66	11,982,185	8.36	7,389,000	69.01	45,885,279
Queen Anne's.....	21.66	4,399,117	20.49	1,492,292	42.15	5,891,319	—	30,560	21.66	3.50	4,429,977	20.49	—	1,545,621	6.06	755,000	48.21	6,730,298
St. Mary's.....	12.43	1,470,817	25.37	2,444,483	37.80	4,415,300	—	46,320	12.43	—	2,017,137	25.37	—	2,553,025	—	—	37.80	4,570,162
Somerset.....	11.31	5,849,069	19.53	687,049	30.84	6,536,118	—	149,229	11.31	—	5,998,298	19.53	—	712,049	—	—	30.84	6,710,317
Talbot.....	—	—	22.39	2,185,771	22.39	2,185,771	—	91,800	—	—	91,800	22.39	0.15	2,202,201	—	—	22.39	2,294,001
Washington.....	13.46	10,873,097	37.41	8,488,723	50.87	19,361,820	—	1,003,152	13.46	7.73	11,876,249	37.41	—	8,820,615	0.03	127,000	50.90	20,823,864
Wicomico.....	11.26	3,543,584	16.47	1,819,220	27.73	5,362,804	—	2,497,623	11.26	—	6,041,207	16.47	—	1,857,874	—	—	27.73	7,899,081
Worcester.....	28.58	6,974,131	11.28	841,751	42.86	7,815,882	—	159,850	28.58	—	7,133,981	14.28	—	964,851	—	—	42.86	8,008,832
TOTAL.....	451.61	\$175,088,155	451.53	\$71,407,879	903.14	\$246,496,034	—	\$27,935,516	451.61	73.44	\$203,023,071	451.53	6.26	\$ 76,543,077	42.90	\$ 16,223,000	946.04	\$265,789,748

During the fiscal years ending June 30, 1957 and June 30, 1958, a total of 90 contracts, representing 195.343 miles of road construction and reconstruction, were awarded, at an authorized cost of \$54,089,013.

The following table summarizes the work covered by these awards:

CONTRACTS AWARDED

FISCAL YEARS 1957 AND 1958

CLASSIFICATION	7-1-56 to 6-30-57			7-1-57 to 6-30-58			TOTAL		
	No.	Miles	Amount	No.	Miles	Amount	No.	Miles	Amount
New Construction	28	55.903	\$30,722,870	22	18.590	\$10,950,782	50	74.493	\$41,673,652
Widening and Resurfacing	18	74.797	8,576,777	13	34.098	3,199,703	31	108.895	11,776,480
Federal Aid Secondary	4	11.655	310,224	—	—	—	4	11.655	310,224
Miscellaneous	3	0.300	215,878	2	—	112,779	5	0.300	328,657
TOTALS	53	142.655	\$39,825,749	37	52.688	\$14,263,264	90	195.343	\$54,089,013

During this biennium there were completed 150 projects, totalling 330.179 miles, authorized to cost \$87,626,823. These totals represent contracts started in fiscal years 1957 to 1958, as follows:

Year Started	Number of Contracts	Miles	Amount Authorized
1954	3	17.244	\$ 4,880,947
1955	29	126.042	34,192,137
1956	51	95.105	31,104,783
1957	57	68.592	16,305,599
1958	10	23.196	1,143,357
TOTALS	150	330.179	\$87,626,823

Among the most notable of the projects completed were the Blue Star Memorial Highway, Md. Route 71, in Kent, Queen Anne's and Cecil Counties, the Glen Burnie By-Pass, the John Hanson Highway between U. S. Route 301 and the George Palmer Highway, and additional sections of

the Baltimore Beltway, the Baltimore National Pike, and the Washington National Pike. A start has also been made on the Washington Circumferential Route, and the construction of the Frederick By-Pass was virtually completed.

Many of the projects under construction at the end of this biennium are due for completion before the end of 1958.

Respectfully submitted,

NORMAN M. PRITCHETT,
Chief Engineer

DEPUTY CHIEF ENGINEER

WALTER C. HOPKINS

Deputy Chief Engineer

WILLIAM A. JORDAN

Highway Engineer, III

NORTHAM B. FRIESE

Highway Engineer, III

JAMES I. CROWTHER

Highway Engineer, III

DEPUTY CHIEF ENGINEER

The Deputy Chief Engineer is the direct representative of the Commission and the Chief Engineer, with respect to overall policy and execution of the Commission's directives applicable generally to all phases of construction and maintenance of the State's highway system, but more specifically with respect to work performed by consulting engineers employed by the Commission for general highway work; for construction of Revenue Bonds Toll Projects, and for the Commission's Improvements Program.

OFFICE OF THE DEPUTY CHIEF ENGINEER

CONSULTANT ENGINEERING SERVICE

In 1956, the Commission entered the third year of its full scale operation under the Twelve Year Program. This year also marked the advent of the Federal Aid Highway Act of 1956 which provided for completion of the Federal Interstate System of Highways. The volume and magnitude of the engineering services required in the preparation of plans and specifications, and in supervision and inspection of construction of projects under the Twelve Year Program, was such that the Commission was unable to handle many of these projects in its own departments. The additional engineering requirements of the Federal Aid Highway Act of 1956 imposed an even greater work load on an already overtaxed engineering staff. In order to keep abreast of the Twelve Year Program and meet the requirements of Federal Interstate projects, it was necessary to retain the services of consulting engineers. It has been the duty of the Deputy Chief Engineer to prepare contractual forms and agreements for engineering services; to negotiate with consulting engineers for their services; to review the proposals submitted, and to make recommendations with respect to employment of consulting engineers by the Commission.

During the period from July 1, 1956 to June 30, 1958, approximately seventy agreements for engineering services were processed by the Deputy Chief Engineer and approved by the Commission. These agreements involved over twenty-five local and out-of-state consulting engineering firms.

REVENUE BONDS TOLL PROJECTS

PATAPSCO TUNNEL PROJECT

On June 7, 1954, the Commission delegated the Deputy Chief Engineer to act as liaison representative between the State Roads Commission and various agencies, engineers and contractors in connection with the design and construction of this project.

The project, officially named the BALTIMORE HARBOR TUNNEL, consists of a 1.45 mile long, twin-tube tunnel under the Patapsco River between Fairfield and Canton, with 16.06 miles of divided highway, containing twelve interchange connections.

Since official ground breaking ceremonies on April 21, 1955, progress schedules for design and construction were essentially met, to the extent

that the project was sufficiently completed to open to traffic by the scheduled date. Dedication ceremonies were held on November 29, 1957 in the toll plaza at the Fairfield end of the tunnel, and the project was opened to traffic at 12:01 A.M. on November 30, 1957.

Miscellaneous clean-up work continued after the project was opened to traffic, but virtually all construction has been completed except for water-front bulkhead and restoration work.

NORTHEASTERN EXPRESSWAY PROJECT

Following the authorization by the Maryland Legislature of 1955 to construct the Northeastern Expressway as a toll facility, the Deputy Chief Engineer was designated by the Commission to act as liaison officer between the Commission and the various groups and agencies connected with the project. With the enactment of the Federal Aid Highway Act of 1956, the attitude toward financing the project as a toll facility began to change. The unsatisfactory experience of some States with recently completed toll facilities, and the unfavorable bond market with high interest rates, gave impetus to the already changing attitude toward the project. On August 8, 1957, the Chairman formally advised the Bureau of Public Roads of the Commission's intent to construct the project as a free road on the Interstate System of Highways. The new aspect of the project brought on extensive changes in the engineering requirements for the project and consequently the duties previously delegated to the Deputy Chief Engineer have been gradually assigned to other divisions.

CAPITAL IMPROVEMENTS PROGRAM

On September 23, 1957, the Commission's Capital Improvement Program was assigned to the Deputy Chief Engineer. This assignment involves a program for construction of new building facilities and improvements to existing facilities.

A program was immediately initiated to develop standard plans for district offices, shops and garages which, with minor variations, could be utilized in all districts. Plans and specifications have been completed for the proposed Snow Hill garage in Worcester County, and the design of standard plans for district offices, shop and garage facilities is nearing completion.

Liaison has also been maintained with the Director, Department of Public Improvements, in connection with the planning and construction of the Commission's new office building located in the new State Office Center.

CONSTRUCTION

CORDT A. GOLDEISEN

Director of Highway Construction

CLARENCE W. CLAWSON

Engineer of Road Design

FRANK V. DREYER

Chief, Location Engineer

ALBERT L. GRUBB

Chief, Bureau of Bridges

C. STUART LINVILLE

Development Engineer

J. ELDRIDGE WOOD

Chief, Bureau of Soils and Materials

JOHN D. BUSHBY

Engineer of Special Operations

WARREN B. DUCKETT

Construction Engineer

HUGH G. DOWNS

Engineer of Special Services



Relocated U. S. 40 at Polish Mountain, under construction.

DIRECTOR OF HIGHWAY CONSTRUCTION

The Director of Highway Construction forms a direct contact between the Chief Engineer, Deputy Chief Engineer and seven District Engineers relative to construction projects.

He also exercises general supervision over the activities of the Highway Location and Survey Division, Division of Road Design, Bureau of Bridges, Bureau of Soils and Materials, Construction Division, the recently established Development Engineering Division, Special Operations, and Office of Special Services.

Reports from each of these Divisions appear in the following pages.

HIGHWAY LOCATION AND SURVEY DIVISION

This Division, under the supervision of Mr. Frank V. Dreyer, Chief Location Engineer, is charged with the responsibility of performing the highway location studies and field surveys necessary for the preparation of Construction Plans and Right-of-Way Plats. The Division, in close cooperation with the Traffic Division, and under the direction of the Chief Engineer, serves as a planning staff for highway projects in future programs.

Due to the great volume of work resulting from the Twelve Year Program and the 1956 Federal Highway Act, this division has expanded rapidly, and is now comprised of 180 employees. Mr. Roland M. Thompson and Mr. James F. Lcsket, Sr. are the two principal assistants to the division head, and are responsible for directing location studies conducted by the office personnel, and supervising 30 survey parties in the field. Also engaged in field reconnaissance and location studies are Mr. Charles W. Ruzicka, Mr. Edgar J. Streb, Mr. William T. Sprague and Mr. Ridgely H. Dorsey. Mr. George W. Bushby is in charge of the Property Survey Section, which performs condemnation surveys, staking right-of-way lines and preparing special right-of-way plats. Mr. Pierce E. Cody III is the immediate supervisor of the Drafting Section of 20 employees.

The following tabulation is a resume of the survey work accomplished by field parties in the fiscal years, July 1, 1956 to June 30, 1957 and July 1, 1957 to June 30, 1958. An additional table shows the breakdown of the survey work for the years covered by this report.

TABLES SHOWING WORK ACCOMPLISHED BY STATE ROADS COMMISSION'S SURVEY PARTIES
FISCAL YEAR, JULY 1, 1956 TO JUNE 30, 1957

DESCRIPTION	MILES PRIMARY ROADS	MILES SECONDARY ROADS	TOTAL MILES
Traverse Surveys	33.00	131.35	164.35
Preliminary Centerline Surveys	56.89	116.19	173.08
Construction Stakeouts	32.05	23.27	55.32
Right-of-Way Stakeouts	61.04	33.50	94.54

Borrow Pits:

- 20 Preliminary Borrow Pits
- 19 Final Borrow Pits

FISCAL YEAR, JULY 1, 1957 TO JUNE 30, 1958

DESCRIPTION	MILES PRIMARY ROADS	MILES SECONDARY ROADS	TOTAL MILES
Traverse Surveys.....	62.00	137.90	199.90
Preliminary Centerline Surveys.....	79.67	71.86	151.53
Construction Stakeouts.....	62.36	20.31	82.67
Right-of-Way Stakeouts.....	55.00	36.49	91.49

Borrow Pits:

- 4 Preliminary Borrow Pits
- 8 Final Borrow Pits

NOTE: Due to advanced highway standards requiring that all surveys shall provide for ultimate dualization, progress shown is classified 'PRIMARY' or 'SECONDARY'. The term "Traverse Surveys," as used in these Tables, covers complete surveys on roads of minor importance, on which it is not necessary to make the more exacting centerline surveys. It should be noted in interpreting the Tables shown above, that more work is performed than is indicated in the tabulation.

For a modern highway—especially in the dual highway classification—extensive spur lines must be run on all streams and intersecting roads. The aggregate of these spur lines may be twice the mainline mileage.

Interchange areas, bridge locations, etc., must be very carefully contoured; and all such work, although not showing as 'mileage' in the Tables above, amounts to probably 15% of the survey forces' work.

BREAKDOWN OF WORK ACCOMPLISHED BY SURVEY PARTIES

DESCRIPTION	JULY 1, 1956 to JUNE 30, 1957	JULY 1, 1957 to JUNE 30, 1958
Traverse.....	164.35 Miles	199.90 Miles
Topo.....	340.00 "	375.00 "
Preliminary Centerline.....	173.08 "	151.53 "
Preliminary Cross-Sections.....	226.64 "	166.23 "
Check Levels.....	207.63 "	172.75 "
Profile.....	167.12 "	165.25 "
Spurs.....	170.00 "	196.00 "
Reset Centerline.....	176.47 "	181.80 "
Final Centerline.....	45.30 "	22.21 "
Final Cross-Sections.....	45.30 "	22.21 "
Construction Stakeout.....	55.32 "	82.67 "
Right-of-Way Stakeout.....	94.54 "	91.49 "
Miscellaneous Property Data	14.00 "	17.00 "
Condemnation Stakeout.....	120.00 "	158.00 "
Cut Cross-Sections.....	43.72 "	72.40 "
Cut Centerline.....	66.33 "	60.81 "
Property Survey.....	250 Parcels	300 Parcels
Preliminary Pits.....	20	4
Final Pits.....	19	8
Bridge Stakeout.....	1	
Miscellaneous Fieldwork.....	1,060 Days	1,125 Days

DIVISION OF ROAD DESIGN

The major function of this Division, under the direction of Mr. Clarence W. Clawson, Engineer of Road Design, Messrs. Frederic A. Hering and William A. Kollmer, Assistant Engineers of Road Design and

Mr. Edgar L. Reese, Field Investigation Engineer is the detailed preparation of construction plans, right-of-way plats, specifications and proposal forms for highway and incidental construction.

The personnel of this Division are assigned to groups under the direction of Associate Engineers to perform the varied phases of this Division's work as outlined below.

DESIGN

The preliminary design in the preparation of highway plans consists of platting the survey data furnished by the Location Division, consisting of alignment, existing grades and topography. Preliminary proposed grades are then established along with the design of a preliminary typical cross-section of improvement, the preliminary delineation of the proposed right of way, the assembling of traffic data, the preliminary design of channelized intersections and traffic interchanges. The preliminary plans are then referred to the Field Investigation Engineer for a study in the field with representatives of the District Engineer's Office, Location Division, Right-of-Way Division, Traffic Division and Materials Division. The recommendations of these Divisions resulting from the field review are then referred to a final design group under the direction of an Associate Engineer for the completion of final plans.

This work requires a careful study of drainage conditions to establish and design proper drainage structures. Detailed studies of intersection channelization at grade and traffic interchanges are made and the correct type facility developed to handle the anticipated traffic volumes.

The completed plans include a complete tabulation of quantities of the various items applicable to each project together with the necessary Special Provisions and proposal quantities to be used in advertising the various projects for bids. The group in charge of the design of a particular project also prepares plats delineating the required right of way.

This Division prepared detailed construction plans and special provisions for advertising covering 302 miles of construction during the fiscal years of 1957 and 1958. The details of the contracts covered are shown in the reports from the various Districts.

RIGHT OF WAY AND CONDEMNATION DATA

This Division is also charged with the preparation of condemnation plats, property mosaics and miscellaneous data required in any condemnation proceedings for the acquisition of rights of way necessary for the construction of the various highways projects.

A total of 404 condemnation plats and 948 right of way plats for the acquisition of rights of way were prepared during the fiscal years of 1957 and 1958.

FINAL EARTHWORK QUANTITIES

Another phase of this Division's work is the computation of final earthwork quantities whenever required.

ELECTRONIC COMPUTER

The use of the Electronic Computer in the Highway Engineering field has been recognized as a time saving method in Engineering Computation.

This Division has completed the programming of a number of Highway Engineering Problems for solution on the Electronic Computer and as a result will be able to realize a considerable saving in time and manpower.

BUREAU OF BRIDGES

The functions of this Bureau are divided into three major categories: design, construction, and maintenance of bridges, under the direction of Mr. A. L. Grubb, Chief, Bureau of Bridges.

The "Twelve Year Program", caused the need of this expansion of work in addition to its former duties of designing, preparing plans and specifications for new bridges, and the widening, and/or repair of old bridges. Preparation of plans, specifications and reports are under the supervision of Mr. H. H. Bowers, Bridge Design Engineer; bridge construction for the Western Area is under the supervision of Mr. David Silver, Jr.; and the bridge construction for the Eastern Area is under the supervision of Mr. L. W. Carr. Bridge maintenance is under the supervision of Mr. Paul A. Kempter.

During the period covered by this report, the Bureau of Bridges released for advertisement 92 contracts for various highway structures, ranging from major bridges to small culvert structures, repairs to existing bridges and widening projects. Of these contracts 57 were designed and specifications prepared by consulting engineering firms; of the 57 projects designed by Consultants, 5 were substantially revised during the final design or construction periods by Engineers of the Bureau of Bridges.

Also, several bridge structures, destroyed by flash floods, were replaced immediately under direction of the Bureau.

Detailed design, plans and specifications were made for highway grade separation structures, highway interchange structures, stream crossings

(among which were several prestressed concrete bridges), and single and multi-celled culverts. Many of these projects included the complete design and drafting of connecting approach roads and a substantial number were for repairing, rehabilitating, and widening existing structures which required ingenious solutions of the problems presented. Furthermore, the detailed structural steel drawings, reinforcing steel drawings, and form plans for these structures were checked by either the consulting engineers or the Bureau of Bridges depending upon origin of design.

Details of the bridge contracts advertised during this biennium are covered in the reports from the various Districts.

BUREAU OF SOILS AND MATERIALS

The responsibilities of this bureau, under the direction of J. Eldridge Wood, are to insure the quality of materials offered for use, establish the reliability of sources of supply, and to investigate new materials and methods. Detailed explanations of the activities of the Bureau in carrying out these functions have been given in previous reports, and will not be repeated.

During this biennium, this Bureau, in its investigations of new and improved products, methods and procedures, has cooperated in testing programs conducted by the American Association of State Highway Officials, the American Association for Testing Materials, and the National Bureau of Standards.

The following tabulations show, statistically, the work accomplished during this biennium by the various subdivisions of the Bureau.

BITUMINOUS CONCRETE
EXTRACTION BRANCH

Material	July 1, 1956 to June 30, 1957	July 1, 1957 to June 30, 1958	Total
Composite Samples from Bituminous Concrete Plants.....	929	1,094	2,023
Plant Mixed Stabilized Aggregate Base Course.....	29	705	734
Sources of Aggregate.....	56	11	67
Road Samples.....	253	190	443
Total Samples.....	1,267	2,000	3,267
Total Number of Tests	2,253	3,358	5,611

BITUMINOUS CONCRETE
PHYSICAL TEST BRANCH

Material	July 1, 1956 to June 30, 1957	July 1, 1957 to June 30, 1958	Total
Marshall Specimens.....	784	1,007	1,791
Road Samples.....	367	285	652
Immersion—Compression.....	6	18	24
Special Projects.....	4	16	20
Total Samples.....	1,161	1,326	2,487
Total Number of Tests	1,265	2,763	4,028

BITUMINOUS MATERIALS SECTION

Material	July 1, 1956 to June 30, 1957	July 1, 1957 to June 30, 1958	Total
Abson Recovery Tests.....	35	26	61
Asphalt Cement.....	290	343	633
Asphalt Emulsion.....	33	128	161
Joint and Crack Sealer.....	55	47	102
Liquid Asphalt.....	92	59	151
Lubricants.....	67	56	123
Motor Fuel.....	12	9	21
Road Tar.....	12	12	24
Waterproofing and Dampproofing.....	8	14	22
Total Samples Tested.....	604	694	1,298
Total Number of Tests	1,621	2,223	3,844

CHEMICAL STATISTICAL DATA

Material	July 1, 1956 to June 30, 1957	July 1, 1957 to June 30, 1958	Total
Calcium Chloride...	18	40	58
Canvas, Duck	9	23	32
Cement	0	7	7
Cork	13	9	22
Enamel, Dipping	8	5	13
Enamel, Equipment	6	9	15
Galvanized Base Metal	417	383	800
Galvanized Hardware	35	49	84
Glass Beads	7	16	23
Helical Pipe	12	13	25
Lime.....	2	8	10
Paint, bridge	77	158	235
Paint, guard rail	27	29	56
Paint, traffic	53	120	173
Primer, metal	3	3	6
Soil samples	11	128	139
Thinner...	2	2	4
Top soil	11	18	29
Varnish, asphalt	8	9	17
Varnish, spar	2	0	2
Fiber washers	4	26	30
Fly Ash...	1	8	9
Fertilizer...	2	0	2
Water.....	476	669	1,145
Miscellaneous	10	19	29
Total Samples Tested	1,214	1,751	2,965
Total Number of Tests	3,298	5,145	8,446

TESTS MADE BY THE PORTLAND CEMENT CONCRETE SECTION

Material	July 1, 1956 to June 30, 1957	July 1, 1957 to June 30, 1958	Total
Block, Concrete.....	10	14	24
Brick.....	20	17	37
Castings, Iron.....	262	293	555
Cement.....	30	45	75
Curing Agents, Concrete.....	20	19	39
Cylinders, Concrete Test.....	4,270	5,790	10,060
Gravel.....	167	135	302
Guard Fence, Fittings and Cable.....	9	6	15
Joint Filler, Premounded.....	38	25	63
Miscellaneous.....	22	26	48
Mix Designs, Concrete.....	262	184	446
Pipe, Cast Iron and Fittings.....	11	18	29
Pipe, Concrete, Reinforced.....	291	261	552
Pipe, Vitrified.....	24	28	52
Sand.....	153	135	288
Screenings and Dust.....	61	55	116
Slag.....	29	42	71
Steel, Cable for Prestressed Concrete.....	7	8	15
Steel, Reinforcing.....	597	651	1,248
Stone.....	316	309	627
Water.....	13	9	22
Welders, Certified.....	10	34	44
Welders, Tested.....	18	48	66
Weldments.....	53	38	91
Wire and Mesh.....	259	233	492
Total Samples.....	6,952	8,423	15,377
Total Number of Tests.....	12,541	13,941	26,482

SOILS STATISTICAL DATA

Work Performed	July 1, 1956 to June 30, 1957	July 1, 1957 to June 30, 1958	Total
Borrow pits sampled and analysis performed.....	273	299	572
Gravel pits sampled and analysis performed.....	258	171	429
Soils sampled from surveys and analysis performed.....	2,494	4,487	6,981
Proctor Density and moisture determinations made.....	797	1,930	2,722
143 Soil Surveys made and soil profiles prepared for proposed construction of.....	149 miles	262 miles	411 miles
Total routine classification analysis of soil samples.....	25,592	43,958	69,550

NOTE: The test quantity does not include extensive tests on fly ash not incorporated in active project work, also limited in-place tests for compaction, water samples or top soil samples.

INSPECTION

The Construction Division under the direction of Warren B. Duckett, is charged with the over-all supervision of inspection on work done by contractors and by the Special Operations Division, except for large bridge structures.

The chief function of this Division is to see that the work on roadways and small structures is performed in compliance with the plans, specifications and special provisions. This is done, under the direction of the Construction Engineer, by a force of Associate Engineers, Assistant Engineers and Inspectors. There were, in these classifications, 309 employes at the close of the biennium. They are distributed within the Districts, under the immediate supervision of the District Engineer.

Procedures are coordinated on a State-wide basis, and every effort is made to obtain a uniform application of specifications throughout the State.

During the period covered by this report, awards were made on 98 contracts for work supervised by this Division, covering 344 miles of road and costing approximately \$74,500,000.

DEVELOPMENT ENGINEERING DIVISION

This Division was established in October, 1957 under the direction of C. Stuart Linville, Development Engineer, with a staff consisting of eight assistants.

The primary purpose of this Division is to coordinate State Roads Commission highway planning with local planning agencies and land developers. At present, its activities are confined to the metropolitan area of Baltimore and Washington and encompass the following counties: Baltimore, Harford, Howard, Montgomery, Prince George's, and Anne Arundel. One Assistant Development Engineer is assigned to each county with the following functions:

Review all building applications submitted to the county authorities for conflict with State Roads Commission plans and take appropriate action.

Review all zoning applications submitted to county authorities and/or planning boards for conflict with State Roads Commission plans.

Review all subdivision and property plats and advise regarding State Roads Commission requirements.

Present State Roads Commission proposed requirements at zoning hearings and attend county highway planning meetings.

Review all commercial entrance permit applications, make engineering studies and issue permit in accordance with State Roads Commission policy.

Advise prospective developers regarding the affect of State Roads Commission planning on their property.

Coordinate proposed development with Location and Right of Way Divisions.

During the period October 1, 1957 to June 30, 1958 the following has been accomplished:

Building Permits Reviewed.....	15,276
Zoning Applications	473
Subdivision and Property Plats.....	762
Commercial Entrance Permits Issued.....	188

The operation of this Division has resulted in considerable saving to the Commission by dedication and/or reservation of areas required for State Roads Commission improvements, denial of rezoning in areas of future improvement and the relocation of proposed structures to avoid conflict with programmed highways.

DIVISION OF SPECIAL SERVICES

This Division, under the supervision of Hugh G. Downs, assisted by M. D. Philpot and J. C. Pritchett, maintains all contacts with the consultant engineers assigned by the Commission to the production of surveys, or plans, or both for road and bridge projects. This encompasses supervision of the consultant's work from preliminary planning to the production of final plans, proposal forms ready for advertisement, and estimated construction costs.

During the period of this report, the Division processed the work of twenty-six consulting engineering firms, involving projects covering highway and bridge projects on interstate, primary and secondary routes, as shown in the following list:

234 miles roadways—advertised (including highway plans completed in preceding 6 months)
262 miles roadway plans—supervised
145 miles roadway plans—completed and approval recommended
117 miles roadway plans—to be completed by end of 1958
1,106 right of way plats

- 60 bridges—advertised (including bridge plans completed in preceding 6 months)
- 117 culverts—advertised (including bridge plans completed in preceding 6 months)
- 75 bridge plans supervised
- 130 culvert plans supervised
- 50 bridge plans completed and approval recommended
- 70 culvert plans—completed and approval recommended
- 25 bridge plans—to be completed by end of 1958
- 58 culvert plans—to be completed by end of 1958

DIVISION No. 9, SPECIAL OPERATIONS

To help relieve the idleness at the various penal institutions of the State, the 1937 General Assembly authorized and directed the State Roads Commission to expend the sum of \$100,000.00 per year for the fiscal years of 1938-39, such monies to be used for the purpose of establishing reconstruction, betterment and maintenance projects suitable for prison labor. Subsequent General Assemblies have not only continued this authorization, but have increased it to the point that the State Roads Commission may, at the present time, spend any available funds on projects which they consider suitable for prison labor work.

The type projects assigned to this Division have been widening and resurfacing of pavement surfaces, the extension and widening of drainage structures, widening of cuts and fills, the correction of drainage problems and clearing and grubbing. Projects selected for accomplishment by this Division are planned and directed by John D. Bushby, Engineer of Special Operations. He is assisted by four area engineers together with sufficient junior engineers and other personnel capable of supervising and directing prison laborers.

The following table shows the projects authorized, for work by this Division, during this biennium:

REPORT OF THE STATE ROADS COMMISSION OF MARYLAND

SPECIAL OPERATIONS PROJECTS AUTHORIZED JULY 1, 1900 TO JUNE 30, 1920

CONTRACT NUMBER	LOCATION		MILES	DESCRIPTION OF PROJECT	AUTHORIZED	
	ROUTE No.	FROM TO			AMOUNT	DATE
AA-448X-1-520	Md. 2	Relocation at Mt. Zion	0.322	Gr., Dr. 2 La. & Grav. Surf. etc. 1 La.	\$46,332	9-26-56
AA-488X-2-520	Md. 2	Md. 258	0.511	Clear and grubb only	9,075	12-6-56
AA-488X-1-520	Md. 2	Relocation Old Mill Bottom Rd.		Gr., Dr. and Surf Treat.	91,828	4-2-57
AA-526X-521	U. S. 50	Intersection Mill Bottom Rd.		2 Left Turn Storage Lanes	2,624	7-3-57
AA-530X-521	Md. 416	At Intersection Md. 259 and 259		Add. Traffic Lane	2,748	10-23-57
AA-485X-11-520	U. S. 301	Glen Burnie By-Pass to Benfield		Rehab. N. Bound Lane	127,499	3-26-58
AA-536X-514	U. S. 50	Parole to Patuxent River		Landscape Planting	10,615	4-30-58
AA-533X-2-515	B-W Expy.	Between Jessup and Dorsey Rds.		Clear and Grub. 30 Acres for Service Area	27,500	5-28-58
B-709X-415	U. S. 111	At Joppa Road and Dulany Valley Road		Channelization modifications	8,580	8-1-56
B-709X-415	U. S. 111	At Joppa Road and Md. 146		Channelization modifications	4,287	2-6-57
B-722X-421	Md. 700	Between PRR Bridge and Middle River Road		Widen and surf. W. Bound Lane for left turn slot	4,967	5-22-57
B-726X-414	U. S. 40	Known as Area No. 7 and No. 9		Install necessary drainage	8,841	6-18-57
B-731X-421	Md. 150	At Intersection Harrison Ave.		Gr. Turb. and Reloc. Fence	2,041	10-10-57
C-226X-2-520	Md. 402	Md. 2 to Dares Beach		Clear, Grub. and Reloc. Fence	17,729	6-18-57
C-217X-2-514	Md. 2	Sunderland S.R.C. Shop		Install septic tank, etc.	541	3-5-58
Ce-237X-1-220	Md. 404	Md. 16 to Delaware Line	6.310	Wood. Arches, W. & R. 1st Stage	314,806	8-28-57
Ch-341X-4-720	Md. 31	Westminster—Manchester		Widen Br. over Cranberry Run	7,462	10-10-57
Ch-295X-2-520	Md. 226	Bryans Road to Marshall Hall		Supplemental funds for drainage, bit. conc. dunes, dsh surf. treatment.	11,351	11-14-56
Ch-316X-521	Md. 225	Approach to Mattowman Cr. Br.		9' surf. Tr. Grav. 1st Stage	38,572	12-30-57
H-440X-414	Md. 40	Church Creek to Boothby Hill		Install necessary drainage	19,860	3-27-57
H-440X-1-414	U. S. 40	Known as Area No. 7 and No. 9		Widen roadway and rebuild Wall	17,683	6-18-57
Ho-270X-3-720	Md. 102	St. Paul St., Ellicott City		Stabilize, drain and resurf. Spec. B	37,928	8-1-56
Ho-302X-720	Md. 176	U. S. 1 to Anne Arundel County	0.906	Complete, W. meaning and resurfacing	36,501	11-21-56
K-188X-11-220	County Rd.	Chesterville to Md. 71		Double Surf., Tr. K-211-1	9,900	12-6-56
K-211X-3-220	Md. 290	Galena		Wid. E. By La.	26,554	10-1-57
M-564X-321	Md. 118	At Access Road and U. S. 240 Interch. Ramp		24 Gravel Road	4,213	10-23-57
P-735X-4-320	Rel. Md. 4	Patuxent River to Md. 704		Landscape Planting	17,340	1-8-58
P-631X-36-314	U. S. 50	150' W. from 73rd Street in District Heights	0.28	Wid. on S. side	11,935	4-30-58
P-815X-321	Md. 4	Intersection Md. 456		Constr. 200' curb and sidewalk	19,472	5-14-58
Q-168X-4-215	Md. 71	Matapeake—Romancoke		Bring sho. to x-sect. after surf. on Q-295-1	1,487	7-17-57
Q-295X-4-220	Md. 33				32,776	10-1-57
SM-309X-2-520	Md. 235	Sta. 411 to Sta. 483		Clearing and grubbing 19.5 acres	21,450	10-5-56
SM-309X-2-520	Md. 235	Between Sta. 400 and 441 and Sta. 483 and 520		Clearing and grubb. only	11,616	2-1-57
S-207-2-121	Md. 413	Marion to Hopewell		Grade shldr. after surf. on S-207-1-121	35,159	9-18-57
S-210X-121	Md. 363	Deal Island Bridge to Wenona	1.70	Widen and resurf. and widen bridge	51,205	6-19-58
Wf-271X-3-120	Md. 455	2.3 Mi. E. of Parsonberg-Melton	2.30	Gr., dr. and surf. etc.	86,864	2-1-57
Wf-271X-3-120	Md. 455	2.3 Mi. E. of Parsonberg-Melton	2.30	Gr., dr. and surf. etc.	86,865	6-26-57
Wf-271X-4-120	Md. 455	Wf-271X-3-120		R/W Utility cost	1,933	8-8-57
Wf-341X-9-120	Md. 12	3rd and last Part of road to Snow Hill	3.40	Clear, const. shldr. and drain, etc.	129,800	9-18-56
Wf-341X-11-120	Md. 12	Wicomico County Line towards Snow Hill		Grade and compact 2-12' shoulders	30,085	12-12-56
Wf-341X-11-120	Md. 12	Wicomico County Line towards Snow Hill		Const. 2-12' shldr. to grade	14,493	8-8-57
Wf-341X-10-120	Md. 12	For 0.8 mi. N. of Snow Hill	0.80	Wid. and resurf.	175,873	4-17-58
Wf-341X-14-120	Md. 12	Snow Hill to Girdletree	2.44	Wid. and resurf. 1st Stage	118,496	6-12-58
		GRAND TOTAL.....	18.969		\$1,736,886	



New office building and garage at Cambridge.

MAINTENANCE

P. A. MORISON

Director of Highway Maintenance

FRANK P. SCRIVENER

Maintenance Engineer

S. W. BAUMILLER

Landscape Engineer

LOUIS PFARR

Supervisor, Highway Markings

DIRECTOR OF HIGHWAY MAINTENANCE

Until his retirement at the close of this biennium, P. A. Morison functioned as Director of Highway Maintenance. In the performance of his duties, he maintained a direct contact between the Chief Engineer, Deputy Chief Engineer and the District Engineers of the seven Districts, relative to all operations in connection with the maintenance of the highway system.

Reports covering the operation of all Divisions concerned with maintenance of highways appear in the following pages.

MAINTENANCE DIVISION

Under the direction of the Maintenance Engineer, this division exercises general supervision in order to better coordinate maintenance operations and insure uniformity of maintenance methods, practices and policies at a State-wide level.

In addition to the carrying on of normal operations, the ever-increasing demands of the traveling public for additional services has to be met. Further, this organization must be prepared to keep the highways safe and passable during periods of emergency.

The State is divided into seven maintenance districts, corresponding in location to the construction districts, each under a District Engineer. An Assistant District Engineer is assigned to each district, whose duties are to coordinate the various maintenance activities on the district level, inspect periodically in detail, and exercise control of maintenance work and its related functions.

A Resident Maintenance Engineer is located in each county, whose duties are to program and assign and direct operations in the county to which he is assigned.

The tabulation below shows the number of field maintenance men in the maintenance organization :

Chauffeur	297
Road Foreman	90
Chauffeur-Foreman	95
Motor Equipment Operator	140
Automobile Mechanic	64
Gas Shovel Operator	18
Blacksmith	2
Shop Foreman	20
Shop Clerk	34
Skilled and Unskilled Laborers.....	1200

During the period of this report, the standard work week for field forces changed from 45 to 40 hours per week, five 8-hour days, Monday through Friday. This change was brought about by an act of the State Legislature requiring a 40-hour work week. Although the work week was shortened 5 hours, the classified employee received no salary decrease, while hourly employees received a 10% raise.

During emergencies, however, such as snow storms and floods, maintenance forces work around the clock until the roads are again safe for travel.

There are 19,473.49 miles of road in the State of Maryland. This Department maintains 4,707.94 miles of road in the State system and 2,248.21 miles in the County system. This latter total includes the County roads in Cecil, Kent, Queen Anne's, Talbot, Calvert and St. Mary's Counties.

LANDSCAPING

The activities of this phase of the work for this biennium were under the direction of S. W. Baumiller, Landscape Engineer. On or about the close of the fiscal year 1958, however, due to the increased work load, a Landscape Superintendent was appointed, who will be responsible for the control and direction of all professional administrative landscape work.

The Landscape Engineer has assisted the District Engineers with all work items of a landscape nature; has prepared landscape development programs for work by State Forces and Special Operations; has assisted the Right-of-Way Division in acquiring rights of way involving landscape work which called for cost estimates for moving or resetting of plant material; and has co-operated closely with garden clubs and other civic organizations on State approved roadside planting projects.

The Interstate Highway program has provided for comprehensive landscape work on all Interstate Highways, greatly increasing the demands for landscape plans, specifications, etc. and this Division is now in the process of employing additional help.

SIGN SHOP

Under the direction of the Supervisor of Highway Markings, the sign shop, located in Baltimore, manufactured, painted and/or repainted 73,000 signs and markers used throughout the State Roads System. In addition, this shop maintains all types of signs. This requires a repaint every 4 or 5 years. All signs, markers and surface markings are in conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways. The uniformity of pavement markings is further insured by the fact that a paint crew operating out of this shop applies surface markings to the pavement. This one crew works state wide.

During this biennium, the practice of striping pavement edges on all dual highways was inaugurated.

As the result of a recent survey, the following tabulation indicates the normal condition and monetary value of all of the signs and markers in place along the State system.

GOOD				
<i>District</i>	<i>Signs</i>	<i>Value</i>	<i>Posts</i>	<i>Value</i>
1	6,665	\$ 27,169.44	7,062	\$ 12,358.50
2	10,145	50,036.28	10,899	19,073.25
3	18,483	66,344.57	19,575	34,256.25
4	12,894	51,022.65	14,285	24,998.75
5	10,917	44,255.15	12,022	21,038.50
6	5,787	31,513.65	8,592	15,036.00
7	6,732	30,920.18	7,125	21,468.75
		\$301,261.18		\$139,230.00

OBSOLETE		
<i>District</i>	<i>Signs</i>	<i>Estimated Cost of Replacement</i>
1	1,641	\$ 4,739.15
2	1,580	3,955.00
3	2,264	9,791.45
4	1,994	7,294.03
5	2,079	6,628.30
6	4,071	14,275.43
7	1,362	3,803.77
		\$50,527.13

EQUIPMENT DIVISION

The Equipment Division, under the direction of Mr. Truman A. Keeney, Equipment Engineer, is charged with the complete supervision over all activities concerned with the purchase, servicing, maintaining, repairing and disposition of State Roads Commission equipment.

The Equipment Engineer maintains a direct contact with the Commission through the Special Assistant to the Chairman, the Chief Engineer and the District Engineers and Division Heads. He exercises general supervision over the Equipment Supervisor and the District Equipment Supervisors relative to all service, maintenance and repair operations of the State Roads Commission equipment.

During this biennium, General Services Administration surplus equipment and material has been made available to the Commission, through the Bureau of Public Roads, at no charge, or at a fraction of the original cost. Advantage has been taken of these surpluses in the securing of shop, electronic and engineering equipment, small tools, structural steel, etc. and of the following highway equipment:

3 Buses -----	No Charge	
15 Pickup Trucks -----	No Charge	
49 Dump Trucks -----	No Charge	
7 Stake Trucks -----	\$ 4,991.42	
1 Rotary Snow Plow Truck--	7,282.00—Original cost	\$36,412.00
7 Truck Tractors -----	10,141.60—Original cost	50,708.00
4 Tool Box Trailers-----	1,882.80—Original cost	18,828.00
2 Tank Trailers -----	1,742.80—Original cost	8,714.00

The three buses and fifteen pickups secured at No Charge, cost \$3,999.02 to paint and put in first class operating condition and the forty-nine dump trucks cost \$29,606.18 to paint and put in first class operating condition. The other units secured and for which token payments were made, required only minor repairs and painting to conform with State Roads Commission specifications.

As of June 30, 1958, the Commission had 268 passenger cars, 3 buses, 670 trucks and 1,771 pieces of miscellaneous highway equipment. Compared to the fiscal year ended June 30, 1956, there was an increase of 18 passenger cars, 2 buses, 83 trucks and 185 pieces of miscellaneous highway equipment. The above figures do not include the highway equipment of the Toll Facilities Operation, which had, at the end of the fiscal year

1958, 11 passenger cars, 51 trucks and 57 pieces of miscellaneous highway equipment. Compared to the fiscal year ended 1956, there was in the Toll Facilities Operation, an increase of 2 passenger cars, 32 trucks and 24 pieces of miscellaneous highway equipment.

During the fiscal years 1957 and 1958, the Commission purchased or acquired 661 units of highway equipment valued at \$1,146,331.79 and traded in or sold 343 units of highway equipment at allowances or salvage of \$171,687.11 resulting in a net cost of \$974,644.68 for Highway Equipment. The Commission - Toll Facilities, which operates under a separate fund, purchased 72 units of highway equipment valued at \$331,711.44 and traded in 14 units of highway equipment at allowances of \$3,925.15 resulting in a net cost of \$327,786.29 for Toll Facilities highway equipment.

There were, in addition to the trade-ins and sale of highway equipment, 30 small, obsolete or broken pieces of equipment, such as: truck chassis, conveyors, gang mowers, hand mowers, hand paint machines, pumps, tar kettles, etc. which were stripped of all usable parts for other equipment, removed from the Equipment Inventory and sold as scrap with other accumulated scrap materials.

The Equipment Division also maintains complete Highway Equipment Inventory and Equipment Maintenance and Repair Records, keeps in close contact with the Accounting Division on the Unit Cost Accounts, sees that all equipment is properly titled, licensed, insured and accidents properly reported, analyzed, estimates obtained and proper repairs made, prepares budget estimates on the purchase of equipment, directives on the care, maintenance, and operation of equipment, and reports to various government agencies, states and State Roads Commission districts, divisions and personnel.



Md. Route 413 through Crisfield, before and after improvement.



DISTRICT No. 1

Headquarters -- Salisbury, Maryland

C. ALBERT SKIRVEN
District Engineer

CARROLL L. BREWINGTON, JR.
Assistant District Engineer
Construction

CLARENCE W. TAYLOR
Assistant District Engineer
Maintenance

DORCHESTER COUNTY
WILLIAM H. MOORE
Resident Maintenance Engineer

SOMERSET AND WICOMICO COUNTIES
WILLIAM P. HOBBS
Resident Maintenance Engineer

WORCESTER COUNTY
JAMES W. SMALL
Resident Maintenance Engineer

DISTRICT No. 1

District No. 1 comprises Dorchester, Somerset, Wicomico and Worcester Counties, and extends from the Choptank River on the north to the mid-Virginia line on the south, and from the Chesapeake Bay on the west to the Atlantic Ocean on the east.

Due to the generally low lying, flat waters of the terrain, drainage is very important in both construction and maintenance activities.

A breakdown of the miles of roads maintained by the State Roads Commission's forces follows:

County	State System	County System	Total
Dorchester.....	155.69	—	155.69
Somerset.....	117.23	—	117.23
Wicomico.....	141.49	—	141.49
Worcester.....	171.57	436.94*	608.51

* Worcester County assumed maintenance of its County roads July 1, 1957.

All counties now maintain the county system of roads beginning as follows: Dorchester—July 1, 1947; Wicomico—July 1, 1953; Somerset—July 1, 1955; Worcester—July 1, 1957.

For the year ending June 30, 1957 district maintenance personnel amounted to 141 employees. As of July 1, 1957, when the Worcester County authorities assumed maintenance of their roads, 29 of these employees, who had formerly worked primarily on the county roads, resigned from State Roads Commission employment and were hired by Worcester County.

The following equipment, which had been used for the most part in county road maintenance, was sold to the Worcester County Roads Board: 2 pickup trucks; 4 dump trucks; 1 D-7 Dozer; 3 Motor Graders; 2 Pull Graders; 1 5-ton Roller; and other miscellaneous equipment.

Dorchester County now carries on its maintenance operations from its new shop at Cambridge. This building was completed in 1957, replacing the old shop and location at Rhodesdale.

Tables showing data pertaining to road construction and maintenance operations for the biennium follow.

ROAD CONSTRUCTION CONTRACTS
 JULY 1, 1956 TO JUNE 30, 1958
 DISTRICT No. 1

CONTRACT NUMBER	LOCATION			MILES	DESCRIPTION OF PROJECT	DATE ADVERTISED	TOTAL AMOUNT AUTHORIZED
	ROUTE No.	FROM	TO				
Wi-285-1	Md. 663	At Tonytank Pond	NEW CONSTRUCTION	0.136	2 Cell. Retn. Conc. Br. Impounding Dam	2-5-57	\$ 151,415
Wo-352-2	U. S. 50	Md. 452	Existing U. S. 50 N. W. of Berlin	1.482	Dual Single R. Conc.	7-16-57	1,339,509
S-195-1, 4	U. S. 13	Princess Anne By-Pass including	Bridge over Manokin R.	1.706 3.523	2 Sp. Prestr. Conc. Br. 1 La. of Dual Concrete	7-9-57	1,405,939
Wi-292-5 (Wo-306-2)	Mill Street Exl., Sal. Pocomoke By-Pass	E. Branch Wicomico River	Salisbury	—	3 Sp. Prestr. Conc. Beam Bridge	8-6-57	217,376
S-177-2 (S-177-2)	Pocomoke By-Pass	Over Pocomoke River		0.173	25 Sp. St. Beam Bridge— $\frac{1}{2}$ cost	5-20-58	790,930
Wo-306-2	Pocomoke By-Pass	Over Pocomoke River		0.173	25 Sp. St. Beam Bridge— $\frac{1}{2}$ cost	5-20-58	790,931
			Total.....	7.193			\$4,696,100
D-279-1	Md. 16	Church Creek toward	WIDENING AND RESURFACING	2.282	Mod. Wid. and Resurf. Sand Agg. Base Bit. Tr. 1st Stage	9-18-56	\$671,747
Wo-341-4 (Wo-367-1)	Md. 14	Wicomico County Line toward	Woolford Snow Hill	6.056	Spec. B Resurf. (Mileage prev. incl. in P. L.)	10-2-56	234,635
S-207-1 (S-207-1)	Md. 413 Old	Marion	Hopewell	2.481	Spec. B. Resurf.	5-28-57	57,646
Wo-367-1	U. S. 113	N. and S. of Newark	to Md. 354	2.784	Spec. B. Resurf.	5-28-57	68,357
Wo-341-5	Md. 12	0.69 Mi. S. E. of Nassawango Cr.	Hudson	3.233	Spec. B. Resurf.	9-3-57	114,357
D-258-1	Md. 343	3.2 Mi. W. of Cambridge toward		3.112	Wid. and Resurf. Spec. B.	9-24-57	459,288
			Total.....	19.948			\$1,602,080
			GRAND TOTAL..	27.141			\$6,298,130

MAINTENANCE REPORT
 JULY 1, 1956 TO JUNE 30, 1957
 DISTRICT No. 1—FISCAL YEAR 1957

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	8,845	28,830	2,009	—
Blading—Dragging	Miles	—	—	—	130.5
Jacking—Asphalt	Sq. yds.	—	—	—	—
Jacking—Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	2,300	1,531	—	—
Oiling—Bituminous	Sq. yds.	44,944	170,373	80,400	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	3,750	133,809	—	700
Blading—Dragging	Miles	—	3,246	—	—
Sodding	Sq. yds.	—	—	400	—
Mowing and Hand Cutting	Miles	—	325	1,211	—
Oiling—Bituminous	Sq. yds.	127,716	88,802	—	—
Removal—Excess Material	Cu. yds.	—	—	—	7,364

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	260	—	—
Pipe and Box Culverts	Number	—	2	121
Curb and Gutter	Lin. ft.	—	—	—
Catch Basins	Number	5	4	2
Spillways, Etc.	Number	1	—	—
Bituminous Rebutt	Lin. ft.	—	—	—
Underdrain	Lin. ft.	—	—	—

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	140	—	—
Posts	Number	57	30	47
Cable	Lin. ft.	610	—	470
Fittings	Number	—	10	—
Paint	Gals.	11	—	2

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing.....	Miles	1,107	195
Beautification.....	Sq. yds.	—	293,650
Resetting Fence.....	Lin. ft.	—	—
Removal of Debris.....	Truck Loads	436	31
Top-Soil.....	Cu. yds.	1,000	—
Cutting Grass.....	Acres	125	77
Trimming Trees.....	Number	3	—
Moving Equipment.....	Units	80	—
	Miles	3,141	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers.....	Number	6,795
Surface Guide Lines.....	Miles	98.5
Surface Marking, Schools, R.R., etc.....	Number	96
Snow Removal.....	Inches Mi.	55½''—3,119 Miles
Ice Treatment.....	Cu. yds.	2,470
Traffic Lights.....	Number	44
Snow Fence.....	Lin. ft.	161,700
Manual Traffic Count.....	Hours	1,386

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New).....	Lin. ft.	1,400
Cleaning—Ditches.....	Lin. ft.	288,080
Cleaning—Pipe Culverts.....	Number	423
Cleaning—Box Culverts.....	Number	57
Cleaning—Bridges.....	Number	64
Cleaning—Catch Basins.....	Number	405
Cleaning—Miscellaneous Structures.....	Number	—
Riprapping.....	Sq. yds.	235

MAINTENANCE REPORT
 JULY 1, 1957 TO JUNE 30, 1958
 DISTRICT No. 1—FISCAL YEAR 1958

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching.....	Sq. yds.	34,549	42,046	810	—
Blading—Dragging.....	Miles	—	—	—	—
Jacking—Asphalt.....	Sq. yds.	—	—	—	—
Jacking—Cement Slurry.....	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous.....	Sq. yds.	—	—	—	—
Joint and Crack Filling.....	Gals.	12,527	3,300	—	—
Oiling—Bituminous.....	Sq. yds.	255,457	101,963	190,688	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching.....	Sq. yds.	16,425	70,258	—	—
Blading—Dragging.....	Miles	—	2,540	110	1,100
Sodding.....	Sq. yds.	—	—	90	—
Mowing and Hand Cutting.....	Miles	—	362	1,430	—
Oiling—Bituminous.....	Sq. yds.	92,927	18,421	—	—
Removal—Excess Material.....	Cu. yds.	—	22,298	—	3,163

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs.....	Number	227	—	—
Pipe and Box Culverts.....	Number	1	4	65
Curb and Gutter.....	Lin. ft.	35	—	—
Catch Basins.....	Number	2	1	—
Spillways, Etc.....	Number	4	—	—
Bituminous Rebutt.....	Lin. ft.	—	—	—
Underdrain.....	Lin. ft.	200	—	—

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence.....	Lin. ft.	200	98	—
Posts.....	Number	49	17	107
Cable.....	Lin. ft.	390	—	1,070
Fittings.....	Number	4	42	—
Paint.....	Gals.	48½	—	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing.....	Miles	726	142
Beautification.....	Sq. yds.	4,640	50,350
Resetting Fence.....	Lin. ft.	200	—
Removal of Debris.....	Truck Loads	386	45
Top-Soil.....	Cu. yds.	—	—
Cutting Grass.....	Acres	552	179
Trimming Trees.....	Number	23	—
Moving Equipment.....	Units	58	—
	Miles	1,476	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers.....	Number	3,952
Surface Guide Lines.....	Miles	135.51
Surface Marking, Schools, R.R., etc.	Number	49
Snow Removal.....	Inches Mi.	92''—3,851 miles
Ice Treatment.....	Cu. yds.	2,204
Traffic Lights.....	Number	60
Snow Fence.....	Lin. ft.	168,600
Manual Traffic Count.....	Hours	1,440

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New).....	Lin. ft.	500
Cleaning—Ditches.....	Lin. ft.	96,187
Cleaning—Pipe Culverts.....	Number	527
Cleaning—Box Culverts.....	Number	20
Cleaning—Bridges.....	Number	56
Cleaning—Catch Basins.....	Number	361
Cleaning—Miscellaneous Structures.....	Number	18
Riprapping.....	Sq. yds.	—



A section of the Blue Star Memorial Highway in Queen Anne's County.

DISTRICT No. 2

Headquarters—Chestertown, Maryland

ROLPH TOWNSHEND

District Engineer

C. R. SHARRETT

Assistant District Engineer

Construction

L. B. DEPUTY

Assistant District Engineer

Maintenance

CAROLINE COUNTY

GEORGE H. FOOKS

Resident Maintenance Engineer

CECIL COUNTY

J. J. WARD, JR.

Resident Maintenance Engineer

KENT COUNTY

OWEN S. SELBY

Resident Maintenance Engineer

QUEEN ANNE'S COUNTY

WM. F. LEAVERTON

Resident Maintenance Engineer

TALBOT COUNTY

HARRY C. RASH

Resident Maintenance Engineer

CLYDE C. THRIFT

District Equipment Supervisor

DISTRICT No. 2

This District is composed of Caroline, Cecil, Kent, Queen Anne's and Talbot Counties. The roads in the District maintained by the Commission are shown in the following tabulation:

County	State Roads	County Roads
Caroline	152.31	—
Cecil	209.93	432.07
Kent	172.68	229.55
Queen Anne's	198.62	408.67
Talbot	127.99	286.34
Total	861.53	1,356.63

470.84 miles of county roads in Caroline County are maintained by the County authorities.

The County Commissioners in each of the counties have supplemented the gas tax funds allotted, and, as a consequence, a considerable mileage of hard surfaced roads is added to the county system yearly, and many old bridges are replaced with modern structures.

Regular State road maintenance, such as oiling and snow removal, is normally serviced by headquarters in each County. In emergencies, however, there are no boundaries. The practice of preventive maintenance, such as planting and shoulder stabilization, has resulted in a considerable saving of maintenance funds.

So far as oiling, snow removal, etc. are concerned, the maintenance of County roads has been conducted in a manner similar to State roads.

Tables showing data pertaining to road construction and maintenance operations for the biennium follow.

ROAD CONSTRUCTION CONTRACTS
 JULY 1, 1956 TO JUNE 30, 1958
 DISTRICT NO. 2

CONTRACT NUMBER	LOCATION		MILES	DESCRIPTION OF PROJECT	DATE ADVERTISED	TOTAL AMOUNT AUTHORIZED
	ROUTE No.	FROM				
Ce-395-5 Ce-396-2	Md. 272 Md. 273	S. of Calvert-Pa. Line (Calvert E. & W. Reloc. Calvert E. & W. Reloc.	NEW CONSTRUCTION 1.961 1.336 3.297	Spec. B. Resurf. Spec. B. Resurf.	8-14-56 8-14-56	\$816,666 222,115 \$538,781
Ce-395-1 Ce-359-8	Md. 280 Md. 272	Elkton North East toward	WIDENING AND RESURFACING 6.011 5.256	Reloc. Wid. and Resurf. Spec. B. Reloc. Wid. & Resurf. Spec. B. 1st Stage	7-3-56 12-26-56	\$818,675 791,480
T-163-1	Md. 451	Md. 402 toward	0.152	Channelization—Md. 33	7-16-57	704,584
Co-253-1	Md. 331	Md. 331	3.828	Spec. B., W. and R., 1st Stage	12-31-57	620,493
Ce-359-9	Md. 272	0.6 Mi. S. of Md. 273 toward	5.705	Wid. and Resurf. Flex.	12-31-57	736,016
Q-274-3	U. S. 213	Md. 300	5.800	Wid. and Resurf.	6-17-58	530,788
		Chester River Bridge	6.060	Gr. Dr. Surf. Flex.		
		Total.....	32.812			\$4,222,036
K-219-1		Browntown	SECONDARY 1.420			
K-223-1		Millington	Md. 447	Gravel Surf.	7-31-56	\$45,982
K-225-1		Coleman—Stillpond	Blue Star Mem. Hwy. 1.570			
		Blacks	Neck Road 0.850			
			Newton 2.430	Gravel Surf.	7-31-56	62,837
			Chesterville 2.350	Gravel Surf.	7-31-56	39,361
		Total.....	9.500			\$148,180
Ce-411-214	U. S. 213	Bridge over Bohemia R.	MISCELLANEOUS	St. Deck Floor, Bascule Span	4-29-58	\$25,082
		Total.....				\$25,082
		GRAND TOTAL..	45.609			\$4,934,079

MAINTENANCE REPORT
 JULY 1, 1956—JUNE 30, 1957
 DISTRICT No. 2—FISCAL YEAR 1957
Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching.....	Sq. yds.	198,212	33,165	85,728	4,810
Blading—Dragging.....	Miles	—	—	—	10
Jacking—Asphalt.....	Sq. yds.	—	—	—	—
Jacking—Cement Slurry.....	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous.....	Sq. yds.	—	—	—	—
Joint and Crack Filling.....	Gals.	5,630	—	2,119	—
Oiling—Bituminous.....	Sq. yds.	265,727	151,361	37,227	30,096

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching.....	Sq. yds.	155,943	149,375	—	73,668
Blading—Dragging.....	Miles	—	3,847	18	4,681
Sodding.....	Sq. yds.	—	325	292	—
Mowing and Hand Cutting.....	Miles	—	—	3,485	—
Oiling—Bituminous.....	Sq. yds.	424,384	78,342	—	—
Removal—Excess Material.....	Cu. yds.	—	25,931	—	12,674

Maintenance—Bridges and Structures

	Unit of Charge	Repair	Replacements	New Installations
Bridge Repairs.....	Number	62	1	11
Pipe and Box Culverts.....	Number	3	19	30
Curb and Gutter.....	Lin. ft.	18	—	303
Catch Basins.....	Number	24	—	5
Spillways, etc.....	Number	1	—	—
Bituminous Rebutt.....	Lin. ft.	—	—	—
Underdrain.....	Lin. ft.	—	—	1,967

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence.....	Lin. ft.	2,401	—	2,019
Posts.....	Number	409	123	20
Cable.....	Lin. ft.	4,710	—	—
Fittings.....	Number	764	9	—
Paint.....	Gals.	95	30	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing.....	Miles	6,206	14
Beautification.....	Sq. yds.	22,153	1,290
Resetting Fence.....	Lin. ft.	—	—
Removal of Debris.....	Truck Loads	1,520	113
Top-Soil.....	Cu. yds.	816	—
Cutting Grass.....	Acres	47	532
Trimming Trees.....	Number	129	—
Moving Equipment.....	Units	19	—
	Miles	311	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers.....	Number	13,377
Surface Guide Lines.....	Miles	130
Surface Marking, Schools, R.R., etc.	Number	52
Snow Removal.....	Inches Mi.	18"—8,235 Miles
Ice Treatment.....	Cu. yds.	4,431
Traffic Lights.....	Number	—
Snow Fence.....	Lin. ft.	280,925—dismantled
		285,896
Manual Traffic Count.....	Hours	796

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New).....	Lin. ft.	576
Cleaning—Ditches.....	Lin. ft.	196,186
Cleaning—Pipe Culverts.....	Number	13,635
Cleaning—Box Culverts.....	Number	193
Cleaning—Bridges.....	Number	105
Cleaning—Catch Basins.....	Number	459
Cleaning—Miscellaneous Structures.....	Number	227
Riprapping.....	Sq. yds.	431

MAINTENANCE REPORT
 JULY 1, 1957 TO JUNE 30, 1958
 DISTRICT No. 2—FISCAL YEAR 1958

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	147,647	15,266	232,232	—
Blading— Dragging	Miles	—	—	—	5
Jacking— Asphalt	Sq. yds.	—	—	—	—
Jacking— Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing— Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	11,730	—	2,400	—
Oiling— Bituminous	Sq. yds.	56,320	—	160,178	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	123,866	135,461	210	13,565
Blading— Dragging	Miles	1	4,004	220	1,147
Sodding	Sq. yds.	—	—	60	—
Mowing and Hand Cutting	Miles	—	4,500	3,462	1
Oiling— Bituminous	Sq. yds.	45,390	10,885	—	—
Removal— Excess Material	Cu. yds.	149	—	674	10,802

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	51	—	—
Pipe and Box Culverts	Number	7	12	86
Curb and Gutter	Lin. ft.	179	—	—
Catch Basins	Number	1	—	6
Spillways, Etc.	Number	—	—	—
Bituminous Rebutt.	Lin. ft.	—	—	—
Underdrain	Lin. ft.	—	24	374

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	—	—	1,900
Posts	Number	1,215	100	11
Cable	Lin. ft.	5,820	325	—
Fittings	Number	—	19	—
Paint	Gals.	29	12	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	6,572	180
Beautification	Sq. yds.	—	2,695
Resetting Fence	Lin. ft.	250	—
Removal of Debris	Truck Loads	1,279	140
Top-Soil	Cu. yds.	—	—
Cutting Grass	Acres	102	879
Trimming Trees	Number	173	24
Moving Equipment	Units	11	—
	Miles	226	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers	Number	12,287
Surface Guide Lines	Miles	422
Surface Marking, Schools, R.R., Etc.	Number	163
Snow Removal	Inches Mi.	126½"—51,229 miles
Ice Treatment	Cu. yds.	3,217
Traffic Lights	Number	—
Snow Fence	Lin. ft.	620,650
Manual Traffic Count	Hours	854

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	235
Cleaning—Ditches	Lin. ft.	176,543
Cleaning—Pipe Culverts	Number	2,551
Cleaning—Box Culverts	Number	47
Cleaning—Bridges	Number	139
Cleaning—Catch Basins	Number	413
Cleaning—Miscellaneous Structures	Number	74
Ripraping	Sq. yds.	961



Washington Circumferential Highway, between Rockville Pike, U. S. Route 240 and Connecticut Avenue, Md. Route 193.

DISTRICT No. 3

Headquarters—Laurel, Maryland

LISLE E. MCCARL
District Engineer

WILLIAM L. SHOOK
Assistant District Engineer
Construction

WALTER E. SAYERS
Assistant District Engineer
Maintenance

MONTGOMERY COUNTY

HARRY J. PISTEL
Associate Engineer, Construction

JOSEPH B. KUHN
Resident Maintenance Engineer

PRINCE GEORGE'S COUNTY

JOHN W. WILLIAMS
Assistant Engineer I, Construction

J. PAUL SMITH
Resident Maintenance Engineer

ALBERT H. FRIESE
Assistant Engineer—Permits

DISTRICT No. 3

District No. 3 is comprised of Montgomery and Prince George's Counties. A breakdown of the miles of roads maintained by State Roads Commission forces follows:

County	State System
Montgomery.....	361.03
Prince George's.....	296.92
Total.....	657.95

All county roads in both Montgomery and Prince George's counties are maintained by the respective counties.

The construction awards during the past two years have raised the 12-Year Program funds expended in this district to almost \$90,000.00. The sections of highway completed in the earlier years of the program are now being extended. Radiating outward from the D. C. line, we now have rebuilt New Hampshire Avenue, Wisconsin Avenue, Kenilworth Avenue, and Branch Avenue. The circumferential ties between these radials, such as Viers Mill Road, University Boulevard, and the Washington Circumferential are being constructed as modern dual highways. Work has been accelerated on the Washington National Pike and on the Washington Circumferential Highway since these routes are on the Interstate system.

The entire Maryland Metropolitan area of the District of Columbia is in District 3. The additional mileage acquired annually due to the expanded road construction program and the ever-increasing volume of traffic create conditions that require careful planning and periodical reorganization of supervision to cope with the maintenance problems of today.

During the period covered by this report, a total of 2,100 permits were issued to public utilities and private individuals for entrances and drive-ways.

Tables showing data pertaining to road construction and maintenance operations for the biennium follow.

REPORT OF THE STATE ROADS COMMISSION OF MARYLAND

ROAD CONSTRUCTION CONTRACTS
JULY 1, 1956 TO JUNE 30, 1958
DISTRICT NO. 3

CONTRACT NUMBER	LOCATION		MILES	DESCRIPTION OF PROJECT	DATE ADVERTISED	TOTAL AMOUNT AUTHORIZED
	ROUTE No.	FROM				
M-533-1 M-485-2	U. S. 240	Grosvenor La. Pooks Hill Road	NEW CONSTRUCTION	6.255	Dual Highway R. Conc.	\$3,677,258 350,000
M-485-16 P-760-2 (AA-485-7)	W-N Pike Md. 208	N. of Md. 189 toward At Northwest Branch	Rockville Chestnut St.	2.700	Dual Highway, Spec. B. Raise Exist. Br. Adjust Approaches	1,737,808 131,924
P-756-1 M-485-20 P-724-13	U. S. 301 W-N Pike Md. 201	Over Patuxent River Under Montrose Avenue	Tuckerman Lane	—	Dual 5 Sp. Prest. Conc. Br. ½ Cost 4 Sp. St. Beam Br.	238,730 209,997
M-517-7 (AA-485)	W.C. Hwy. Md. 193	Brier Ditch Over Rock Creek	W. C. Highway	2.440	Dual Highway Conc.	1,559,090
P-756 M-512-30	U. S. 301 W.C. Hwy. Mass. Ave.	A. A. Co. Line Various Bridge Sites	0.2 Mi. N. of W-A Expy.	0.750	3 Sp. St. Beam Br. Dual Main Line	389,759
P-722-44 (AA-485-7)	W.C. Hwy.	Rel. Ardwick—Ardmore Road	0.760	Dual U. S. 50 Conn. Spec. B. Sub-Surf. Expl.	12-18-56	717,966
P-756-1 M-485-35 M-485-24 P-631-34 P-631-32 M-485-33 (AA-487-1)	U. S. 301 W-N Pike W-N Pike W.C. Hwy.	At Patuxent River At Grosvenor La. At Georgetown Pike (Md. 187) At John Hanson Highway	—	Sub-Surf. Expl. Rel. Flex. Pvt. and Beam U'pass W. C. Highway	12-26-56	2,905
M-485-33 P-735-3 M-512-12	W-N Pike Md. 4 W/C Hwy.	2100' N. of Tuckerman La. Near Ritchie Road Md. 193	2.838	Dual Spec. B. 2 Br. Y Conn. Tuckerman La. U'pass	4 16-57	2,462,479
M-512-17 (P-734-1) M-517-5 (M-517-5) M-531-12 P-734-1	W/C Hwy. U. S. 240 W-N Pike Md. 193	Y Connection W. of Four Corners to	0.498	Sub-Surf. Expl. Appr. on Md. 193 St. Beam and Girder U'pass	10-19-57 11-26-57	6,619 948,129
P-713-4	Md. 193	Mont. Co. Line Md. 381 (TB)	0.089 2.108 2.160	Ramps, etc. Dual Hwy. Conc. 6 Welded St. Gird. Br. Dual Hwy.	11-26-57	2,857,749 121,277 1,785,820
P-713-2 P-732-3	U. S. 301 Md. 214	1.5 Mi. N. of Md. 4 E. and W. of U. S. 301	0.080	Dual Hwy. Rigid New N. Bd. La.	12-3-57	40,426
		0.53 Mi. N. of Trump Hill Road	6.226 1.179 7.333 2.290	Rehab. 6.142 Mi. in 6.22 Limits At Interchange Flex. Dual Highway Flex. Brs. and Interch. Dual Highway Flex. Brs. and Interch.	12-24-57 12-31-57 12-31-57	1,862,302 2,658,018 600,008

P-724-17-320	J. Hanson Highway	B. & O. R.R. at Tuxedo	Brown Station Road	—	3 Sp. Single Track R.R. Br.	5-6-58	347,938
P-631-28-320	J. Hanson Highway	P.R.R. 500' W. of Ardwick Rd.	D. C. Line	0.050	3 Sp. Plate Girder Br. over R.R.	5-13-58	704,178
P-735-1-320	Md. 4	Dower House Road	Georgia Avenue	1.500	Single Tr. to complete dual hwy.	6-3-58	4,901,068
M-527-1	Md. 653	Brown Station Road	Md. 202	5.000	Single 3:10' Mt. inter. Co. Roads	6-17-58	2,001,693
P-631-25	J. Hanson Highway	Intersecting State Roads	Md. 202	1.500	Anson St. Conn.	6-24-58	
P-631-26	J. Hanson Highway	D. C. Line	Md. 202	0.050	Dual Highway. 0.451 Conn. Roads		
	J. Hanson Highway	Over John Hanson Highway on	Total.....	0.930	Plate Girder and St. Beam Br.-Dual		\$33,665,264
	J. Hanson Highway	Over P.R.R. on N. Bd. Lane	WIDENING AND RESURFACING	0.040	Spec. B. Surf.		
	J. Hanson Highway	Surf. N. Bd. La. of Md. 202	Old R. I. Avenue	0.180	Pl. Girder Br.	8-21-56	\$270,755
	J. Hanson Highway	Ramp Br. over J. Hanson Hwy.	College Avenue Ext.	0.050		10-23-56	30,707
P-738-5	U. S. 1	Main St., Laurel	B. & O. R.R.	53.822		9-3-57	24,964
P-792	Univ. La. Coll. Ave. Extended	U. S. 1—Colesville Road and	College Ave. to Calv. Rd.		Spec. B. Resurf.		
P-802-1	Md. 434	U. S. 1	Darr Avenue	1.787	Wid. and Resurf.	9-17-57	44,205
M-533-5	Md. 203	U. S. 1 to Dartmouth Ave. and Bradley Blvd.	E-W Hwy.	0.530	Resurf. Spec. B. Resurf.		
	U. S. 240		Total.....	0.512			\$370,631
P-740-317	Riverdale Rd.	Over Capt. John's Branch, Riverdale	SECONDARY	9.990			
P-788-317	Wheeler Rd.	D. C. Line	St. Barnabas Road	—	Widening exist. 12' Sp. Slab Br. Gr., Dr., Surf. Flex.	11-5-56	\$51,211
P-724-26-360	Md. 201	Between Good Luck Road and	Total.....	1.790		6-17-58	\$51,211
			MISCELLANEOUS	—			
			Glendale Road	—	Chain Link Fence, etc. R/W on P-724-13	1-21-58	\$21,890
			Total.....	65.662			\$21,890
			GRAND TOTAL..				\$34,108,996

MAINTENANCE REPORT
 JULY 1, 1956 TO JUNE 30, 1957
 DISTRICT 3—FISCAL YEAR 1957
Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching.....	Sq. yds.	14,475	78,977	83,890	1,493
Blading—Dragging.....	Miles	—	—	—	—
Jacking—Asphalt.....	Sq. yds.	—	—	—	—
Jacking—Cement Slurry.....	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous.....	Sq. yds.	5,625	15	3,441	—
Joint and Crack Filling.....	Gals.	—	5,650	4,291	—
Oiling—Bituminous.....	Sq. yds.	—	186,011	253,600	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching.....	Sq. yds.	2,253	29,947	—	16,770
Blading—Dragging.....	Miles	68	208	—	1,997
Sodding.....	Sq. yds.	—	—	127	—
Mowing and Hand Cutting.....	Miles	—	—	—	999
Oiling—Bituminous.....	Sq. yds.	—	—	—	—
Removal—Excess Material.....	Cu. yds.	—	45	—	1,685

MAINTENANCE REPORT
Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs.....	Number	1	—	3
Pipe and Box Culverts.....	Number	112	—	2
Curb and Gutter.....	Lin. ft.	180	—	110
Catch Basins.....	Number	2	—	3
Spillways, Etc.....	Number	—	—	—
Bituminous Rebutt.....	Lin. ft.	—	—	—
Underdrain.....	Lin. ft.	—	—	—

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence.....	Lin. ft.	3,948	180	—
Posts.....	Number	810	389	58
Cable.....	Lin. ft.	7,485	30	—
Fittings.....	Number	197	68	—
Paint.....	Gals.	34	—	27

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	2,004	44
Beautification	Sq. yds.	5,970	570
Resetting Fence	Lin. ft.	—	—
Removal of Debris	Truck Loads	607	108
Top-Soil	Cu. yds.	—	—
Cutting Grass	Acres	1,191	1,483
Trimming Trees	Number	44	—
Moving Equipment	Units	34	—
	Miles	1,245	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers	Number	18,140
Surface Guide Lines	Miles	578
Surface Marking, Schools, R.R., Etc.	Number	991
Snow Removal	Inches Mi.	5"—3,708 Miles
Ice Treatment	Cu. yds.	4,347
Traffic Lights	Number	—
Snow Fence	Lin. ft.	446,900
Manual Traffic Count	Hours	868

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	610
Cleaning—Ditches	Lin. ft.	131,252
Cleaning—Pipe Culverts	Number	540
Cleaning—Box Culverts	Number	495
Cleaning—Bridges	Number	11
Cleaning—Catch Basins	Number	412
Cleaning—Miscellaneous Structures	Number	67
Riprapping	Sq. yds.	260

JULY 1, 1957 TO JUNE 30, 1958

DISTRICT No. 3—FISCAL YEAR 1958

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	17,839	84,775	66,907	—
Blading—Dragging	Miles	—	—	—	—
Jacking—Asphalt	Sq. yds.	—	—	—	—
Jacking—Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	800	7,700	400	—
Oiling—Bituminous	Sq. yds.	—	234,337	253,161	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	2,740	43,723	—	52,850
Blading—Dragging	Miles	—	—	—	2,869
Sodding	Sq. yds.	—	—	—	191
Mowing and Hand Cutting	Miles	—	—	901	—
Oiling—Bituminous	Sq. yds.	—	—	—	—
Removal—Excess Material	Cu. yds.	—	—	15	80

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	—	—	—
Pipe and Box Culverts	Number	7	—	—
Curb and Gutter	Lin. ft.	260	—	150
Catch Basins	Number	9	—	1
Spillways, Etc.	Number	—	—	—
Bituminous Rebutt	Lin. ft.	—	—	—
Underdrain	Lin. ft.	—	—	—

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	4,200	200	—
Posts	Number	293	174	11
Cable	Lin. ft.	1,860	50	—
Fittings	Number	209	58	—
Paint	Gals.	7	—	—

Right-of-Way

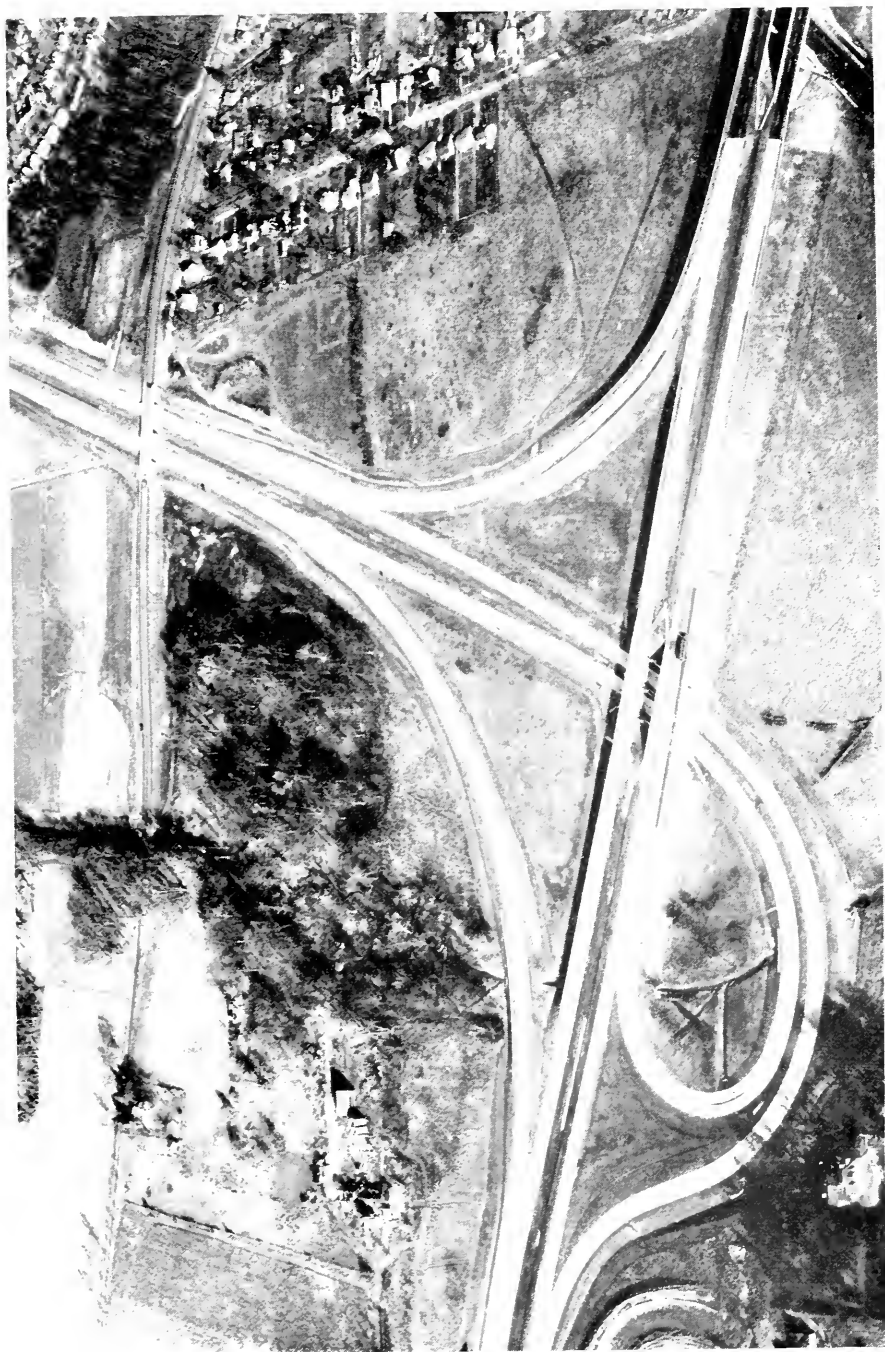
Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	1,701	117
Beautification	Sq. yds.	7,868	Trees planted 1,081
Resetting Fence	Lin. ft.	—	—
Removal of Debris	Truck Loads	588	126
Top-Soil	Cu. yds.	—	—
Cutting Grass	Acres	1,633	589
Trimming Trees	Number	210	195
Moving Equipment	Units	22	—
	Miles	5,579	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers	Number	13,640
Surface Guide Lines	Miles	653
Surface Marking, Schools, R.R., Etc.	Number	1,629
Snow Removal	Inches Mi.	14''—40,846 Miles
Ice Treatment	Cu. yds.	2,390
Traffic Lights	Number	2
Snow Fence	Lin. ft.	291,450
Manual Traffic Count	Hours	2,504

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	182
Cleaning—Ditches	Lin. ft.	93,474
Cleaning—Pipe Culverts	Number	984
Cleaning—Box Culverts	Number	405
Cleaning—Bridges	Number	7
Cleaning—Catch Basins	Number	306
Cleaning—Miscellaneous Structures	Number	700
Ripraping	Sq. yds.	1,120



Trumpet type Interchange at Baltimore Beltway and Baltimore-Harrisburg Expressway.

DISTRICT No. 4

Headquarters—Reisterstown, Maryland

E. C. CHANEY
District Engineer

JOSEPH M. SIMONDS
Assistant District Engineer
Construction

MILTON C. VOLKER
Assistant District Engineer
Maintenance

WILMER N. BARNES
Associate Engineer

PAUL D. SULLIVAN
Associate Engineer

BALTIMORE COUNTY
CHARLES E. HESSON
Resident Maintenance Engineer

WILLIAM K. RICHARDS
Resident Maintenance Engineer

HARFORD COUNTY
PERCY B. SHIPLEY
Resident Maintenance Engineer

PERMITS
ARRA CHANEY
Assistant Engineer I

DISTRICT No. 4

District No. 4 comprises Baltimore and Harford counties. A breakdown of the miles of roads maintained by State Roads Commission forces follows:

County	State System
Baltimore.....	319.00
Harford.....	266.69
Total.....	585.69

All county roads in both Baltimore and Harford counties are maintained by the respective counties.

With the continued growth of the Metropolitan area around Baltimore City and the development adjacent to the incorporated towns in Harford County and various towns in Baltimore County, several thousand permits were issued to utilities, developers, private property owners and to the Division of Engineering of both Baltimore and Harford counties.

The pattern of improvement is becoming evident with the dualization of the major radial roads leading from Baltimore. Sections of the Baltimore Beltway have been constructed which, when completed, will form a circumferential route almost completely encircling Baltimore City and passing through or near the highly developed areas in Baltimore County. Also the Baltimore-Harrisburg Expressway, which will be completed in 1959, is a modern expressway type of road extending from the Baltimore Beltway to the Pennsylvania line.

Along with these new modern highways has come the problem of maintaining their miles of pavement, many acres of grass medians and interchange areas to be mowed, additional signs and snow removal.

Geographically, Baltimore County, in this District, covers practically all of the metropolitan area of Baltimore City. The increasing volume of traffic, along with additional mileage acquired annually by the expanded road construction programs, necessitate carefully planned procedures and modern methods to meet the ever-growing maintenance problems of today.

Of the 319 miles of State roads maintained in Baltimore County, 51.64 miles are divided highways.

In Harford County, 21.71 miles of the 266.69 miles of State highways maintained are divided highways.

Tables showing data pertaining to road construction and maintenance operations for the biennium follow.

ROAD CONSTRUCTION CONTRACTS
 JULY 1, 1956 TO JUNE 30, 1958
 DISTRICT NO. 4

CONTRACT NUMBER	LOCATION		MILES	DESCRIPTION OF PROJECT	DATE ADVERTISED	TOTAL AMOUNT AUTHORIZED
	ROUTE No.	From To				
B-694-1	Md. 372	0.28 Mi. W. of Maiden Ch. La.	NEW CONSTRUCTION 0.938	Dual—Spec. B.	7-17-56	\$505,113
B-635-12	Beltway	S. of Wilkens Avenue	B. C. Line 3.679 U. S. 40 4.224	Dual Br. over C. & L. RR incl. 1 Pa. Ramps and Conn. Roads Conn. and Spec. B.	8-21-56	5,585,531
B-678-1	Md. 139	Bellona Avenue	Beltway 2.595	Dual Conc.	8-28-56	2,678,735
B-635-11	Beltway	Patapsco River	S. of Wilkens Avenue 2.679	Conn. Roads, et.c. Spec. B 3 Sp. St. Girder Br. incl.	9-11-56	4,401,279
B-635-58	Beltway	Over Redoc. Wilkens Avenue	2.097	Dual Highway Ramps and Conn. Roads. Conc. and Spec. B.	10-16-56	381,518
B-635-5, 37	Beltway	Dulaney Valley Road	600' E. of Cromwell Br. Road 3.495	4 Sp. St. Beam Br.—Dual Dual Beltway	11-20-56	4,296,134
B-635-56, 57, (AA-460-3)	Beltway	At Westland Blvd. and at Shellbourne Road	—	Dual Conn. Roads Single Conn. Roads and Ramps 5.176 Rigid—1.227 Flex.	3-5-57	259,338
B-635-50 B-578-36-415	Beltway B-H Expy.	At Patapsco River Between Gunpowder Falls and Interech. at Md. 151	— 0.680	St. Beam U'pass of Westland, at Shellbourne, Prest.E. Conc. Ped. Br.	3-19-57 4-2-57	841,236 9,883
B-711-1	Md. 20	Interech. at Md. 151	1.045	Dual St. Beam Br.—1/2 cost Sub. Surf. expl. at 9 sites Ramps 2 La. Rd. Spec. B. 2-3 Sp. St. Beam Br.	5-14-57 6-25-57 7-30-57	964,208 42,876 190,745
B-635-94 B-635-47	Beltway Beltway	U. S. 40 At Md. 7	—	Sub-surf. expl. at 36 sites 4 Sp. St. Beam Br.—U'pass 4 Sp. St. Beam and Girder Br. 2-27 with 16' Meds.	9-17-57	522,723
B-578-41	B-H Expy.	Rd. U. S. 111 over B-H Expy. Middletown Road	1.884	Dual Highway—Conc. Ramps at U. S. 111 incl.	10-15-57	2,207,860
B-578-32	B-H Expy.	Bridges over Little Falls Cr. & S. Bd. Lane over Bunker Hill Road	—	Dual St. Beam Bridges 3 Sp. St. Beam Br.	10-15-57	76,280
B-578-39	I-H Expy.	Over Pulaaski Highway (U. S. 40) East	—	4 Sp. Dual Conc. and St. Beam Br.	10-22-57	320,327
B-635-48	Beltway	At Old York Road (Md. 439)	—	4 Sp. St. Beam U'pass	11-12-57	141,447
B-578-43	Beltway	Over U. S. 40 W.	—	Dual 4 Sp. St. Beam Br.	11-12-57	266,478
B-635-62	B-H Expy.	0.2 Mi. S. of Mt. Carmel Road—N. of Bunker Hill Road	1.362	S. Bd. Lane Co. Roads—	12-3-57	2,107,340
B-578-40	B-H Expy.	At Middletown Road over B-H Expy.	2.452	Dual Highway / Rigid 1.623 Mi. Flex 4 Sp. St. Beam and Girder Bridge	12-10-57	185,875
B-578-44	B-H Expy.	At Harris Mill Road over B-H Expy.	—	4 Sp. St. Beam and Girder Bridge	12-10-57	109,887
B-578-38	B-H Expy.	At Gunpowder Falls	—	3 Sp. Dual St. Girder Bridge Dual Highway Rigid	12-17-57	809,881
B-578-42, 35 B-578-49-420	B-H Expy. B-H Expy.	1 Mi. N. of Parkton S. Bd. Lane over Western Run	4.392 3.204	Rd. Conn. Flex. Br. at Downes Rd. 3 Sp. St. Beam Bridge	12-31-57 6-3-58	3,032,120 135,419
B-518-2-420	Md. 600	Marlyn Avenue	1.670	Chann. Intersect. inc. Josenhans Cor. Urban Section. Spec. B.	6-24-58	401,543
		Total.....	43.489			\$30,473,876

Project No.	Location	Description	WIDENING AND RESURFACING		Total	Date	Total
			5 841 Fallston Valley Road	Spec. B. Surf. Spec. B. Wid. and Resturf. Spec. B. Resturf. Relec. Wid. and Resturf. B.			
H-360-2	Md. 152	Rutledge	5 841	Spec. B. Surf.	11 310	12 26 56	\$1,396,582
B-710-1	Md. 129	RR, Overpass	0 412	Spec. B. Wid. and Resturf.	—	8 26 57	168,582
BRB-437-1	U. S. 40	Havre de Grace Br. and Appro.	1 000	Spec. B. Resturf.	—	8 28 57	68,620
H-360-3-420	Md. 152	Stockton	4 657	Relec. Wid. and Resturf. B.	—	1 28 58	1,437,445
		Total	11 310				\$3,071,229
		SECONDARY					
H-424-417	Hookers Mill Road	Over Bynum Run	—	2 Sp. Prest. Conc. Bridge	—	11 5 56	\$100,461
H-423-1-417	Pleasantville Road	Over Winters Run	—	Single Sp. St. Beam Bridge	—	2 20 58	140,822
		Total	—		—		\$241,283
		MISCELLANEOUS					
BRB-437	U. S. 40	At Havre de Grace Bridge	—	Addit. Steel	—	7 9 57	\$68,400
		Total	—		—		\$68,400
		GRAND TOTAL	54 799				\$33,854,788

MAINTENANCE REPORT
 JULY 1, 1956 TO JUNE 30, 1957
 DISTRICT No. 4—FISCAL YEAR 1957
Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	47,819	10,476	83,374	—
Blading—Dragging	Miles	640	750	4,955	—
Jacking—Asphalt	Sq. yds.	—	—	—	—
Jacking—Cement Slurry	Sq. yds.	60	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	7,384	24	—	—
Oiling—Bituminous	Sq. yds.	—	—	69,837	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	94,442	65,094	7,470	1.5
Blading—Dragging	Miles	—	229	263	15.40
Sodding	Sq. yds.	18	30	353	—
Mowing and Hand Cutting	Miles	121	146	4,260.54	—
Oiling and Bituminous	Sq. yds.	262,660	—	—	—
Removal—Excess Material	Cu. yds.	—	—	14,331	5,353

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	20	1	8
Pipe and Box Culverts	Number	15	3	60
Curb and Gutter	Lin. ft.	835	870	490
Catch Basins	Number	20	13	20
Spillways, Etc.	Number	—	2	4
Bituminous Rebutt	Lin. ft.	—	—	540
Underdrain	Lin. ft.	3,200	—	531

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
Removed 16,600 Lin. Ft.				
New Fence	Lin. ft.	1,384	981	2,714
Posts	Number	275	525	138
Cable	Lin. ft.	6	1,235	4,732
Fittings	Number	9	282	252
Paint	Gals.	608 ¹ / ₂	97	22
Removed 1,620 ft. of 2 Cabled Fence				
2 Panels—Flexabeam	Lin. ft.	—	25	—
Paint Posts	Number	3,156	—	—
Damrod Posts...	Number	262	—	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grabbing	Miles	625.25	92.5
292 Bags Fertilizer	Miles	12.06	11.06
Beautification	Sq. yds.	47,901	6,100
Resetting Fence	Lin. ft.	5,964	—
Removal of Debris	Truck Loads	858	445
Top-Soil	Cu. yds.	867	322
Cutting Grass	Acres	158	2,052
Trimming Trees	Number	—	—
Moving Equipment	Units	105	—
	Miles	4,344	—
Removal of Trees	Number	23	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Curbs Painted	Lin. ft.	4,350
Snipe Signs	Number	649
Highway Markers	Number	11,731
Surface Guide Lines	Miles	653.9
Surface Marking, Schools, R.R., Etc.	Number	185
Snow Removal	InchesMi.	28½"—3099.74 miles
Ice Treatment	Cu. yds.	8,994
Traffic Lights	Number	28
		311,400
Snow Fence	Lin. ft.	Removed—37,960
Manual Traffic Count	Hours	2,484

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Wall	Cu. ft.	240
Ditching (New)	Lin. ft.	175
Cleaning—Ditches	Lin. ft.	307,525
Cleaning—Pipe Culverts	Number	1,046
Cleaning—Box Culverts	Number	120
Cleaning—Bridges	Number	108
Cleaning—Catch Basins	Number	708
Cleaning—Miscellaneous Structures	Number	—
Riprapping	Sq. yds.	125
Cleaning—Curb and Gutter	Lin. ft.	144,668

MAINTENANCE REPORT
JULY 1, 1957 TO JUNE 30, 1958
DISTRICT No. 4—FISCAL YEAR 1958
Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	55,074	11,014	154,631	—
Blading—Dragging	Miles	—	—	—	—
Jacking—Asphalt	Sq. yds.	—	—	—	—
Jacking—Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	10,171	—	—	—
Oiling—Bituminous	Sq. yds.	—	26,900	211,677	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	79,805	50,019	1,000	27
Blading—Dragging	Miles	—	198	205	13
Sodding	Sq. yds.	—	—	—	—
Mowing and Hand Cutting	Miles	145	84	3,478.60	—
Oiling—Bituminous	Sq. yds.	69,500	1,196	—	—
Removal—Excess Material	Cu. yds.	—	—	8,559	2,925

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	26	—	—
Pipe and Box Culverts	Number	7	3	49
Curb and Gutter	Lin. ft.	135	836	965
Catch Basins	Number	10	2	16
Spillways, Etc.	Number	6	3	2
Bituminous Rebutt	Lin. ft.	98	50	210
Underdrain	Lin. ft.	—	—	679

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	12,500	3,178	883
Posts	Number	815	415	78
Cable	Lin. ft.	—	92	468
Fittings	Number	11	139	96
Paint	Gals.	133	211½	11
Painted Post	Number	1,817	515	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	369	13
Pine Trees	Number	5,400	4,200
Fertilizer	10 Tons		
Beautification	Sq. yds.	200	75
Resetting Fence	Lin. ft.	9,150	—
Removal of Debris	Truck Loads	1,083	391
Top-Soil	Cu. yds.	154½	260
Cutting Grass	Acres	315	2,086
Trimming Trees	Number	188	—
Moving Equipment	Units	132	—
	Miles	4,923	—
Trees Planted	Number	25	—
Trees Removed	Number	26	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Snipe Signs Removed	Number	247
Salt Bin Erected	Number	1
Curbs Painted	Ft.	1,318
Highway Markers	Number	11,446
Surface Guide Lines	Miles	552.6
Surface Marking, Schools, R.R., Etc.	Number	415
Snow Removal	Inches Mi.	81"—4,106.98 Miles
Ice Treatment	Cu. yds.	7,190
Traffic Lights	Number	17
Snow Fence	Lin. ft.	318,900
Manual Traffic Count	Hours	2,518

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	1,209
Cleaning—Ditches	Lin. ft.	343,153
Cleaning—Pipe Culverts	Number	1,014
Cleaning—Box Culverts	Number	53
Cleaning—Bridges	Number	42
Cleaning—Catch Basins	Number	594
Cleaning—Miscellaneous Structures	Number	—
Riprapping	Sq. yds.	629
Cleaning—Curb and Gutter	Lin. ft.	241,205



Old and new bridges at St. George's Island, Md. Route 249 in St. Mary's County.

DISTRICT No. 5

Headquarters—Upper Marlboro, Maryland

E. G. DUNCAN
District Engineer

JOHN H. REEDER
Assistant District Engineer
Construction

O. KENNETH WEBB
Assistant District Engineer
Maintenance

ANNE ARUNDEL COUNTY
JACOB C. WILKERSON
Resident Maintenance Engineer

CALVERT COUNTY
ADAM M. NOLL
Resident Maintenance Engineer

CHARLES COUNTY
W. AUGUSTUS FOWKE
Resident Maintenance Engineer

ST. MARY'S COUNTY
M. CHAPMAN THOMPSON
Resident Maintenance Engineer

DISTRICT No. 5

This District is comprised of Anne Arundel, Calvert, Charles and St. Mary's counties. The county highways of Calvert, Charles and St. Mary's counties are maintained by the District Maintenance forces. Anne Arundel county maintains its own county highways.

The mileage maintained on the State and County highways is shown below :

County	State Highways	County Highways
Anne Arundel.....	311.37	—
Calvert.....	109.71	234.06
Charles.....	229.00	318.98
St. Mary's.....	195.22	338.54

In addition to regular maintenance, 181.73 miles of State roads were surface treated with bituminous material and covered with mineral aggregate. 189.37 miles of County roads received the same treatment.

The District Maintenance forces graded, drained and surfaced with run-of-bank gravel, the following mileages of County highways :

Calvert County	8.40 Miles
Charles County	6.75 Miles
St. Mary's County.....	13.96 Miles

Tables showing data pertaining to road construction contracts and maintenance operations for the biennium follow.

REPORT OF THE STATE ROADS COMMISSION OF MARYLAND

ROAD CONSTRUCTION CONTRACTS
JULY 1, 1956 TO JUNE 30, 1958
DISTRICT NO. 5

CONTRACT NUMBER	LOCATION		MILES	DESCRIPTION OF PROJECT	DATE ADVERTISED	TOTAL AMOUNT AUTHORIZED
	ROUTE No.	FROM				
SM-316-1	Md. 249	Over Narrows at St. Geo. I.	NEW CONSTRUCTION	10 Sp. St. Beam Br. Appr. Fills, Bulkhreads	7-3-56	\$410,917
AA-485-6	U. S. 301	Benefield	2.818	2nd La. of Dual-Surf. Tr. Mac.	7-17-56	623,602
Ch-297-1	Md. 224,225	Over Mattawoman Cr. N. of Ma son Spr.	—	3 Sp. Prestr. Conc. Bridge	7-17-56	198,759
Ch-257-14	U. S. 301	At U. S. RR., White Plains	2.100	Signal Installation, Rail Adj., etc.	7-31-56	35,857
AA-485	U. S. 301	Conaways	0.109	Dual Main Line	12-18-56	544,700
AA-485-1	(P-756-1)	At Patuxent R.	—	Dual Md. 450 Conn. Spec. B. 1st Stage	3-12-57	238,730
AA-485-7	(P-756-2)	At Patuxent R.	—	Dual 5 Sp. Prestr. Conc. Br. 1/2 cost.	3-19-57	841,235
AA-485-8	(P-756-3)	At Patuxent R.	0.514	Dual St. Beam Bridge. 1/2 cost	4-16-57	1,178,906
AA-485-3	(P-756-4)	950' N. of B-W Expy.	1.528	Dual Ramps and Conn. Conc. and Spec. B Dual Br. over Nursery Rd.	5-14-57	317,098
AA-460-3	Md. 2	At Solomons Island	0.320	Spec. B—Wid. and Resurf. Timber Bulkhreads	6-11-57	300,635
AA-460-2	Md. 2	S. Rd. La. at Severn Run	2.463	3 Sp. Prestr. Conc. Beam Bridge	10-8-57	282,827
C-229-1	U. S. 301	Md. 258	—	Surf. Tr. Gravel. 1st Stage	10-15-57	27,520
AA-485-8	U. S. 301	Over Deep Creek at Race Road	—	1 Sp. Prestr. Conc. Beam Bridge	10-29-57	1,356
AA-485-3	U. S. 301	P. G. Co. Line	3.073	Sub. surf Expl.	12-10-57	1,045,632
AA-485-5	U. S. 301	0.5 Mi. S. of Md. 175	Wayson's Cor. Benefield	Rehab. 1,953 Mi. exist. Rd. within 3.073 Mi. limits. New S.Bd. La. Flex. 1st Stage.	12-17-57	809,881
Ch-257-18	U. S. 301	Lyons Corner	5.001	New S. Bd. La. Resurf. Exis. La. Flex. 1st Stage	1-21-58	646,789
AA-485-4-520	U. S. 301	Md. 424 (Conaways)	2.865	New S. Bd. Lane and Rehab. 0.75 mi. within 1st Stage	6-3-58	676,886
Ch-257-18	U. S. 301	Popes Cr. Br. PRR, northerly	5.280	Constr. S. B. 2nd Lane and Resurf. part of pres. lane. 1st Stage	6-10-58	794,205
Ch-257-20	U. S. 301	Potomac River Bridge	5.310	Construct. S. B. Lane. 1st Stage	6-24-58	504,527
AA-477-5-520	Md. 170	0.47 Mi. N. of Md. 176 toward Odenton	2.673	1 La. of Ult. Dual 1st Stage. Spec. B.		
		Total	34.054			\$9,480,062

		WIDENING AND RESURFACING					
Ch-272-5	Md. 231	Hughesville	Patuxent River	Resurf.	Spec. B.	7-3-56	\$91,347
C-197-6	Md. 416	1.8 Mi. S. of Bristol	Calvert Co. Line	Resurf.	Spec. B.	7-17-56	40,307
AA-428-7	Md. 260	Calvert Co. Line	Patuxent River	Resurf.	Spec. B.	7-3-56	59,211
C-204-4	Md. 231	Prince Frederick	Patuxent River	Resurf.	Spec. B.	7-3-56	74,711
(AA-428-5)	Md. 416	AA. Co. Line Southerly	Owings	Resurf.	Spec. B.	5-17-56	868,424
Ch-297-2	Md. 260	Md. 416-AA. Co. Line	Rison	Rel. Wid. and Resurf.	Spec. B.	12-26-56	1,037,476
SM-309-1	Md. 224	Md. 225 toward	Lexington Park	Rel. Wid. and Resurf.	Spec. B.	12-31-56	338,417
SM-309-3	Md. 235	Md. 489	Dares Beach	Mod. Wid and Resurf.	Spec. B.	9-24-57	952,229
C-226-1	Md. 235	2.67 Mi. S. of St. Jas. Ch. Rd.	W. toward Md. 227	Wid. Resurf. etc.	Flex 17' x 9' Box	12-10-57	625,481
Ch-298-1	Md. 222	Md. 2--toward	St. Geo. I. Bridge	Cul. 1st Stage	Spec. B.	12-31-57	\$4,087,663
SM-316-3	Md. 247	0.4 Mi. S. of Valley Lee--	St. Geo. I. Bridge	Wid. and Resurf.	Spec. B.		
			Total	41,985			
		MISCELLANEOUS					
AA-461-2	Md. 2	At South River Bridge	Steel Gir. Floor on Swing Span	Construct. 2 Dwellings.	R/W on	6-12-56	\$114,497
SM-309-4	Md. 235	At Patuxent Naval Air Station	SM-309-1	Repairs to Double 16' Slab Bridge		2-4-58	61,942
Ch-287-1-514	Md. 232	Over Gilbert Swamp	Total			4-15-58	21,988
			GRAND TOTAL	76,039			\$13,766,152

MAINTENANCE REPORT
 JULY 1, 1956 TO JUNE 30, 1957
 DISTRICT No. 5—FISCAL YEAR 1957
Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	3,451	16,656	376,106	156
Blading—Dragging	Miles	—	—	—	2,747.70
Jacking—Asphalt	Sq. yds.	39	—	—	—
Jacking—Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	83,629	—	2,450	—
Joint and Crack Filling	Gals.	6,920	3,587	102	—
Oiling—Bituminous	Sq. yds.	26,025	159,912	1,017,127	—
Base Repairs	Sq. yds.	2,560	—	—	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth and Gravel
Patching	Sq. yds.	6,828	63,139	—	565,177
Blading—Dragging	Miles	—	1,444	—	9,367
Sodding	Sq. yds.	—	—	3,360	—
Mowing and Hand Cutting	Miles	—	7	870	58
Oiling—Bituminous	Sq. yds.	66,105	—	—	15,000
Removal—Excess Material	Cu. yds.	—	550	—	166,703

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	42	—	—
Pipe and Box Culverts	Number	68	108	54 ft.—18" Pipe 11
Curb and Gutter	Lin. ft.	3,365	94	52
Catch Basins	Number	61	1	2
Spillways, Etc.	Number	6	—	3
Bituminous Rebutt	Lin. ft.	—	—	—
Underdrain	Lin. ft.	578	217	179

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	2,975	294	585
Posts.....	Number	3,124	1,036	113
Cable	Lin. ft.	7,674	1,040	48
Fittings	Number	273	241	—
Paint	Gals.	543	167	51

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	2,380.1	782.5
Beautification	Sq. yds.	472,818	17,866
Resetting Fence	Lin. ft.	31,528	—
Removal of Debris	Truck Loads	2,327	521
Top-Soil	Cu. yds.	3,462	1,654
Cutting Grass	Acres	163	2,504
Trimming Trees	Number	115	61
Moving Equipment	Units	234	—
Washouts	Miles	5,806	—
Cutting and Hauling Bushes	Cu. yds.	4,675	—
	Lin. ft.	59,571	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers	Number	8,942
Surface Guide Lines	Miles	277
Surface Marking, Schools, R.R., Etc.	Number	192
Snow Removal	Inches Mi.	31 ¹ / ₂ "—2,970 Miles
Ice Treatment	Cu. yds.	1,942
Traffic Lights	Number	6
Snow Fence	Lin. ft.	107,088
Manual Traffic Count	Hours	1,576

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	10,032
Cleaning—Ditches	Lin. ft.	759,013
Cleaning—Pipe Culverts	Number	3,675
Cleaning—Box Culverts	Number	225
Cleaning—Bridges	Number	86
Cleaning—Catch Basins	Number	310
Cleaning—Miscellaneous Structures	Number	20
Riprapping	Sq. yds.	494.5
Cleaning Pipe	Lin. ft.	75

MAINTENANCE REPORT
 JULY 1, 1957 TO JUNE 30, 1958
 DISTRICT No. 5—FISCAL YEAR 1958
Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	17,108	65,850	395,058	351
Blading—Dragging	Miles	—	.5	—	577
Jacking—Mud	Cu. yds.	6	—	—	—
Jacking—Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	6,826	4,158	890	—
Oiling—Bituminous	Sq. yds.	—	113,228	36,960	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth and Gravel
Patching	Sq. yds.	5,277	26,893	—	391,772
Blading—Dragging	Miles	—	725	—	9,531
Sodding	Sq. yds.	—	—	—	—
Mowing and Hand Cutting	Miles	50.7	—	650	528
Oiling—Bituminous	Sq. yds.	—	—	103,011	—
Removal—Excess Material	Cu. yds.	—	—	—	124,301

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	31	4	—
Pipe and Box Culverts	Number	54	38	6
Curb and Gutter	Lin. ft.	67,655	60	—
Catch Basins	Number	64	—	3
Spillways, Etc.	Number	—	—	6
Bituminous Rebutt	Lin. ft.	—	—	—
Underdrain	Lin. ft.	68	46	122
Bulkhead No. 5101	Lin. ft.	102	—	—

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	10,331	591	1,118
Posts	Number	4,509	740	188
Cable	Lin. ft.	15,683	183	3,462
Fittings	Number	716	202	292
Paint	Gals.	351	136	20
Dismantle	Lin. ft.	270	—	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	1,930.8	1,323
Beautification	Sq. yds.	114,569	12,685
Resetting Fence	Lin. ft.	794	—
Removal of Debris	Truck Loads	945	347
Top-Soil	Cu. yds.	1,904	145
Cutting Grass	Acres	—	3,099
Trimming Trees	Number	74	12
Moving Equipment	Units	218	—
	Miles	8,093	—
Washouts	Cu. yds.	3,492	—
Cleaning Bushes	Lin. ft.	102,885	—
Laying Sod	Sq. ft.	10,000	—
Spreading Fertilizer	Lbs.	25,040	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers	Number	7,961
Surface Guide Lines	Miles	919.9
Surface Marking, Schools R.R., Etc.	Number	326
Snow Removal	Inches Mi.	6,653 Miles
Ice Treatment	Cu. yds.	2,439
Traffic Lights	Number	6
Snow Fence	Lin. ft.	157,977
Manual Traffic Count	Hours	2,412

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	44,136
Cleaning—Ditches	Lin. ft.	594,417
Cleaning—Pipe Culverts	Number	2,416
Cleaning—Box Culverts	Number	461
Cleaning—Bridges	Number	92
Cleaning—Catch Basins	Number	267
Cleaning—Miscellaneous Structures	Number	4
Riprapping	Sq. yds.	108
Installing Drainage	Lin. ft.	1,385



Relocated U. S. Route 40 at Martin Mountain.

DISTRICT No. 6

Headquarters—Cumberland, Maryland
(Braddock Road—State Route 49)

G. BATES CHAIRES
District Engineer

GEORGE E. GEARY
Assistant District Engineer
Construction

R. E. L. PUTMAN
Assistant District Engineer
Maintenance

GARRETT COUNTY
EDWARD P. KAHL
Resident Maintenance Engineer

ALLEGANY COUNTY
GEORGE B. HALE
Resident Maintenance Engineer

WASHINGTON COUNTY
RALPH T. THAYER
Resident Maintenance Engineer

DISTRICT No. 6

This District is comprised of Allegany, Garrett and Washington Counties, with territory ranging from rolling, in the eastern section, to mountainous in the west.

County roads in all of the counties are maintained by the County authorities. The State system maintained in each of the counties follows:

Allegany County -----	144.28 Miles
Garrett County -----	157.81 Miles
Washington County -----	223.88 Miles

Ordinary maintenance was carried on throughout the district as usual. Preventive maintenance, such as spring fertilizing, seeding, planting, etc. have been carried on, with a saving of maintenance funds, throughout the District.

Snow removal and ice treatment continue to be the greatest maintenance problem in this District. In connection with ice treatment, 24,695 cubic yards of cinders were purchased, crushed, stored and applied to road surfaces, and 3,059 tons of salt and calcium chloride were used in the stock piles to prevent freezing, in addition to that applied directly to the surface.

Tables showing data pertaining to road construction and maintenance operations for the biennium follow.

REPORT OF THE STATE ROADS COMMISSION OF MARYLAND

ROAD CONSTRUCTION CONTRACTS
JULY 1, 1956 TO JUNE 30, 1958
DISTRICT NO. 6

CONTRACT NUMBER	ROUTE NO.	LOCATION		MILES	DESCRIPTION OF PROJECT	DATE ADVERTISED	TOTAL AMOUNT AUTHORIZED
		FROM	TO				
A-452-3	Cumberland	Baltimore Road	Johnson St.	—	Sub-surf. Expl.	10 2 56	\$22,872
W-441-3	Thurway	Over Antietam Cr.	—	—	4 Sp. Presfr. Conc. Beam Bridge	10 2 56	217,666
W-428-4	Hag. EW	Over Church and Franklin Street	s. Hagerstown	—	2 Rigid Fr. R. Conc. R.R. U'pass	10 16 56	417,559
W-428-5	Hag. EW	Over Washington and Antietam	Streets, Hagerstown	—	4 Single Sp. St. Plate Girder U'pass	11 5 56	861,703
A-461-7	U. S. 40	Gilpin—along W. Slope Polish	Mountain	1 945	Reloc. Spec. B. surf.	11 28 56	1,958,422
W-446-3	U. S. 40	Pa. Line	U. S. 40	5 497	Dual Highway.	12 31 56	5,389,453
W-446-2	Hag. Ry-P.	Over Martins Road and Showalt	er Road	—	2 Dual 2 Sp. St. Beam Bridges	1-15 57	501,404
A-452-9	NS	Over Exitts Creek	er Road	0 170	3 Sp. Presfr. Conc. Bridge, 2-34'	2 5 57	426,050
W-446-5	Hag. Ry-P.	Over PRR. and over Maugansville	lle Road	—	2 Dual St. Beam Bridges	2 19 57	650,334
W-446-6	NS	At Cearfoss Road (Md. 58) and	at Rel. U. S. 40	—	Dual St. Girder O'pass U. S. 40,	3 5 57	881,694
W-446-4, 13	Hag. Ry-P.	At W. Limits of Frostburg	—	—	St. Girder U'pass, Md. 58	4 16 57	26,909
A-456-5	U. S. 40	N. Church Street, Sharpsburg	—	—	Ext. Exist. Arch with 10' x 6' R. Conc.	4 30 57	23,288
W-451-4	Md. 65	0.3 Mi. S. of Exitts Creek	Thomas and West Street	1 314	Dual	12 10 57	1,158,202
A-452-2	Md. 51	Over B. & O. RR. and Little Y	Long	0 891	Single Lane, Flex.	12 17 57	489,382
A-456-7	U. S. 40	Over W. M. Ry. near Kemps Mill	ough River	0 982	Gr. Dr. Surf. Conc. C. & G. Flex.	12 24 57	180,906
G-270-1	U. S. 219	S. of Antietam Street	North of Church Street	—	St. Beam Bridge and Double 12' x 9'	1 28 58	167,750
W-451-2-620	Md. 63	Gilpin	W. of Flintstone	—	Conc. Cul.	3 11 58	755,765
W-428-6-620	U. S. 40	Gilpin	Oakland	—	PRR. and W.M.Ry. Embank. Ret.	3 18 58	1,317,602
A-464-8	U. S. 40	Gilpin	Oakland	—	Walls, etc.	3 18 58	1,187,863
(G-275-2)	U. S. 219	Gortner	Lynn Street, Cumberland	—	Reconstr. Flex. Bridge over Flintstone	4 15 58	8,778
G-270-2	W. Exc.	Winchester	S. W. of Hagerstown	—	Reloc. etc. Flex.	4 22 58	23,419
A-452-12	Cumb. Thru.	Bloomington-Swanton Road	Md. 38	2 561	Spec. B. Paving	5 6 58	704,403
W-463-2-623	U. S. 40	Over W.M.Ry. approx. 0.4 mi. E. of	Smithsburg	0 630	3 Sp. St. Beam Bridge	6 3 58	114,208
G-282-1	Md. 135	Millstone	Ridge Road	—	Soils explor. 14.5 Mi.	6 3 58	11,003
W-448-12-620	Rel. Md. 64	—	—	—	—	—	—
W-463-29-623	U. S. 40	—	—	—	—	—	—
		Total	Total	27 552			\$17,500,635

W-441-2	Md. 34	Boonsboro	WIDENING AND RESURFACING		8-7-56	\$1,554,832
A-465-1	Md. 36	U. S. 40	0.862 Mi. W. of Md. 35	6,102 Spec. B. Wid. Rel. and Resurf.	11-13-56	815,236
W-442-1	Md. 418	Pa. Line	0.7 Mi. N. E. of Leitersburg	3,193 Rel. Wid. and Resurf. Spec. B.	12-26-56	1,603,328
W-448-7	Md. 64	1.3 Mi. S. of Ringgold	Pa. Line	2,241 Wid. Rel. and Resurf.	12-26-56	
G-275-1	Md. 135	Deer Park toward	U. S. 219	3,371 Wid. Rel. Spec. B. Resurf. and Ext.	6-11-57	815,236
W-449-5	U. S. 40	Huyett (Md. 62) toward	Clear Spring	4,700 Girder Br. 3 Sp. R. C. Slab Br. Incl.	8-27-57	222,578
W-454-1	Md. 63	0.1 Mi. N. of U. S. 11 N. to	0.8 Mi. N. of U. S. 40	4,390 Spec. B. Resurf. (Flag. wd. Frederick incl.)	12-10-57	1,294,090
G-275-2	Md. 135	Mountain Lake Park	Oakland	1,753 Wid. Resurf. Spec. B.	3-18-58	463,273
			Total.....	29,759		\$6,768,573
W-462-617	Marsh Pike Road		SECONDARY		10-16-56	\$169,409
A-475-614	Md. 656	Md. 60	Lehman Mill Road	3,050 Spec. B. Surf.	2-19-57	23,010
	Md. 731	Over George's Creek at Waterloo	iff Road and at Morrison	---		\$192,419
			Total.....	3,050		
W-472-614	U. S. 11	At Williamsport Bridge	MISCELLANEOUS		10-29-57	\$44,379
W-477-614	U. S. 522	Bridge over Potomac River	RRS U. S. 40, etc.	---	2-20-58	2,825
			Total.....	---		\$47,204
			GRAND TOTAL.....	60,361		\$24,508,831

MAINTENANCE REPORT

JULY 1, 1956 TO JUNE 30, 1957

DISTRICT No. 6—FISCAL YEAR 1957

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	14,533	29,458	36,097	1,188
Blading—Dragging	Miles	—	—	—	4.6
Jacking—Asphalt	Sq. yds.	—	—	—	—
Jacking—Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	8,540	—	—	—
Oiling—Bituminous	Sq. yds.	30,977	23,437	207,278	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	9,438	3,800	—	107,095
Blading—Dragging	Miles	—	7	—	1,230.10
Sodding	Sq. yds.	—	—	302	—
Mowing and Hand Cutting	Miles	—	—	1,861	866.2
Oiling—Bituminous	Sq. yds.	—	—	—	—
Removal—Excess Material	Cu. yds.	—	—	—	6,049

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	32	—	—
Pipe and Box Culverts	Number	5	2	10
Curb and Gutter	Lin. ft.	14	—	80
Catch Basins	Number	2	—	1
Spillways, Etc.	Number	—	—	—
Bituminous Rebutt	Lin. ft.	—	—	—
Underdrain	Lin. ft.	—	—	756

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	13,554	—	—
Posts	Number	1,476	216	26
Cable	Lin. ft.	40	—	—
Fittings	Number	74	72	—
Paint	Gals.	223	—	2

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing.....	Miles	3,258.4	—
Beautification.....	Sq. yds.	237,722	—
Resetting Fence.....	Lin. ft.	—	—
Removal of Debris.....	Truck Loads	1,836	—
Top-Soil.....	Cu. yds.	13	—
Cutting Grass.....	Acres	18.5	126
Trimming Trees.....	Number	1,182	—
Moving Equipment.....	Units	13	—
	Miles	625	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers.....	Number	7,435
Surface Guide Lines.....	Miles	205.21
Surface Marking, Schools, R.R., Etc.....	Number	161
Snow Removal.....	Inches Mi.	215.5"—525.97 Miles
Ice Treatment—Sand and Cinders.....	Cu. yds.	12,422.5
Traffic Lights.....	Number	26
Snow Fence—Erected.....	Lin. ft.	326,365
Manual Traffic Count.....	Hours	1,572

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New).....	Lin. ft.	17,162
Cleaning—Ditches.....	Lin. ft.	404,945
Cleaning—Pipe Culverts.....	Number	2,823
Cleaning—Box Culverts.....	Number	118
Cleaning—Bridges.....	Number	25
Cleaning—Catch Basins.....	Number	158
Cleaning—Miscellaneous Structures.....	Number	—
Riprapping.....	Sq. yds.	—
Cleaning—Underdrains.....	Number	113
Cleaning—Grates.....	Number	3

MAINTENANCE REPORT

JULY 1, 1957 TO JUNE 30, 1958

DISTRICT No. 6—FISCAL YEAR 1958

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	12,044	11,417	32,453	—
Blading—Dragging	Miles	—	—	—	4.7
Jacking—Asphalt	Sq. yds.	1,400	—	—	—
Jacking—Base Repair	Sq. yds.	20	—	110	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	6,175	—	—	—
Oiling—Bituminous	Sq. yds.	83,194	—	342,567	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	1,808	118,787	10,200	107,954
Blading—Dragging	Miles	—	—	—	1,331.8
Sodding	Sq. yds.	—	—	156	—
Mowing and Hand Cutting	Miles	—	—	10,318	514.3
Oiling—Bituminous	Sq. yds.	—	—	—	—
Removal—Excess Material	Cu. yds.	—	—	—	8,882

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	32	—	—
Pipe and Box Culverts	Number	16	1	12
Curb and Gutter	Lin. ft.	380	—	40
Catch Basins	Number	1	—	3
Spillways, Etc.	Number	—	—	—
Bituminous Rebutt	Lin. ft.	—	—	240
Underdrain	Lin. ft.	—	—	242

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	18,518	—	280
Posts	Number	1,174	531	26
Cable	Lin. ft.	1,003	—	—
Fittings	Number	214	94	24
Paint	Gals.	453	1	1

MAINTENANCE REPORT—Continued

Right-of-Way

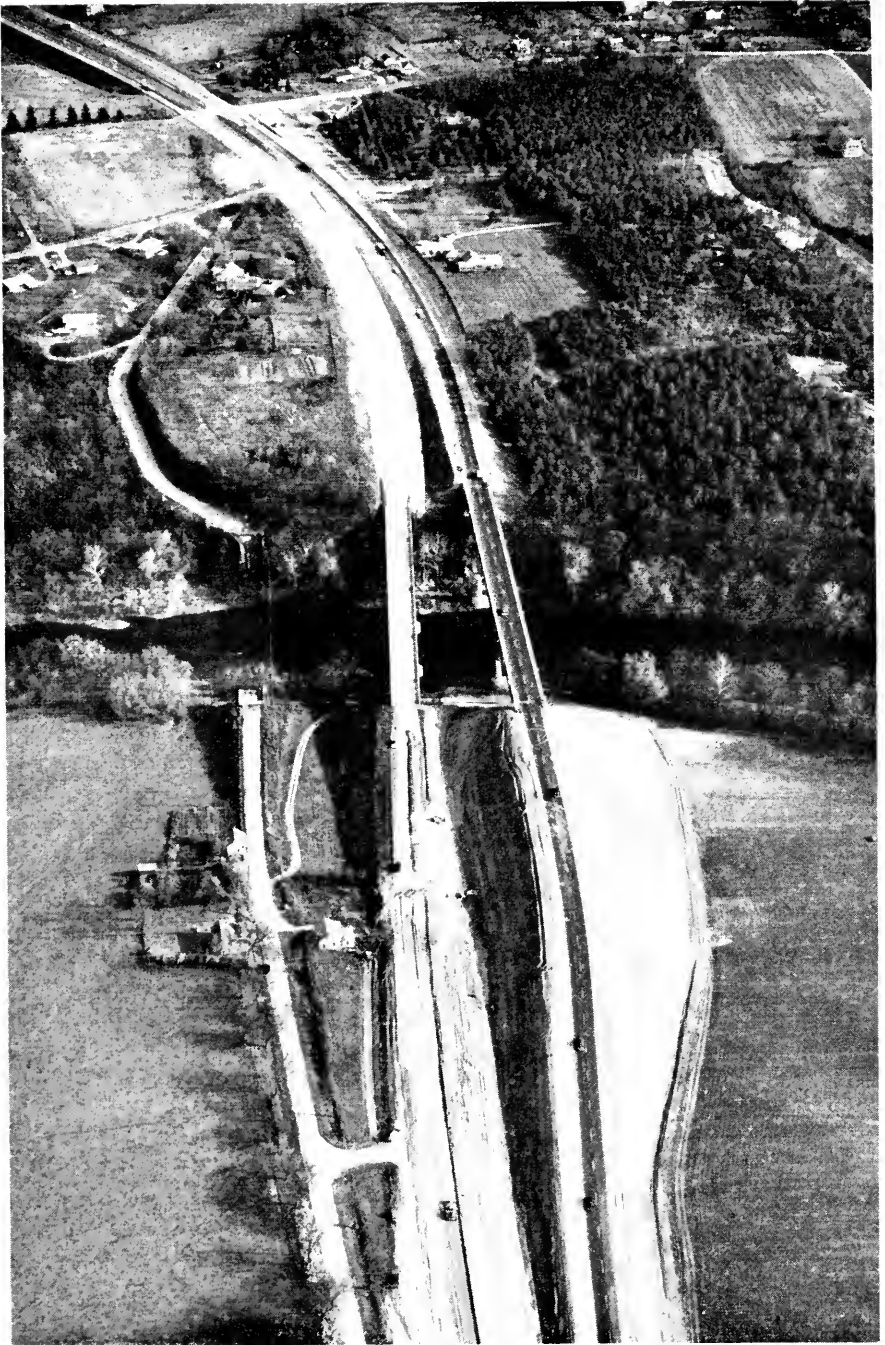
Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	3,629.2	—
Beautification	Sq. yds.	451,613	—
Resetting Fence	Lin. ft.	795	—
Removal of Debris	Truck Loads	1,256	—
Top-Soil	Cu. yds.	56	—
Cutting Grass	Acres	8.3	132
Trimming Trees	Number	145	—
Moving Equipment	Units	5	—
	Miles	88	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers	Number	8,960
Surface Guide Lines	Miles	128.05
Surface Marking, Schools, R.R., Etc.	Number	89
Snow Removal	Inches Mi.	324.0"—525.97 Miles
Ice Treatment	Cu. yds.	13,327
Traffic Lights	Number	49
Snow Fence—Erected	Lin. ft.	333,075
Manual Traffic Count	Hours	1,548

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	77,447
Cleaning—Ditches	Lin. ft.	379,345
Cleaning—Pipe Culverts	Number	2,413
Cleaning—Box Culverts	Number	266
Cleaning—Bridges	Number	29
Cleaning—Catch Basins	Number	98
Cleaning—Miscellaneous Structures-Grates	Number	55
Riprapping	Sq. yds.	—
Cleaning—Underdrain	Number	38



Baltimore National Pike, Approach to Frederick By-Pass at the Monocacy River.

DISTRICT No. 7

Headquarters—Frederick, Maryland

THOMAS G. MOHLER
District Engineer

DONALD S. BROWN
Assistant District Engineer
Construction

F. LA MOTTE SMITH
Assistant District Engineer
Maintenance

CARROLL COUNTY
B. F. THOMAS
Resident Maintenance Engineer

FREDERICK COUNTY
J. RAY HARTMAN
Resident Maintenance Engineer

HOWARD COUNTY
HOBART B. NOLL
Resident Maintenance Engineer

DISTRICT No. 7

This District comprises Carroll, Frederick and Howard counties. There are 630.42 miles of State roads under maintenance in these three counties.

County roads in this District are maintained by the authorities of the respective counties.

The mileage of State roads as shown above includes the main streets of the following towns: In Carroll County, Westminster, Taneytown, Manchester, Hampstead, New Windsor, Union Bridge, Sykesville and Mt. Airy; in Frederick County, Frederick, Middletown, Emmitsburg, Thurmont and New Market; and in Elkrige in Howard County.

Regular maintenance was carried on as usual. No extraordinary maintenance was required during the biennium.

Tables showing data pertaining to road construction and maintenance operations for the biennium follow.

ROAD CONSTRUCTION CONTRACTS
JULY 1, 1956 TO JUNE 30, 1958
DISTRICT No. 7

CONTRACT NUMBER	LOCATION		MILES	DESCRIPTION OF PROJECT	DATE ADVERTISED	TOTAL AMOUNT AUTHORIZED
	FROM	TO				
Ho-265-3	Old U. S. 29	Appr. to Bridge over Little Patuxent River	0.763	Spec. B. Surf.	7-10-56	\$243,447
F-490-5	U. S. 40	S. of U. S. 40 W.	0.830	Dual Highway	9-25-56	216,584
F-490-9	F. By-Pass	South Street	2.120	Kamp and Conn. Road. Spec. B.	10-9-56	272,650
F-490-14	U. S. 40	Over B. & O. R.R. and Rel.	1.086	4 Sp. Dual St. Beam Bridge	10-9-56	810,368
F-490-4	F. By-Pass	Motter Avenue—Tuscarora Creek and Md. 26 Conn.	2.178	Dual (Md. 26) U. S. 15	10-9-56	
F-490-4	U. S. 40		0.562	Trumpet Interch.		
F-592-1	F. By-Pass	E. Patrick Street	1.550	Ramps, etc. Spec. B.	11-5-56	1,248,757
F-490-6	Md. 73	1.2 Mi. N. of Frederick	2.447	Reloc., etc. Spec. B.	5-28-57	294,819
F-490-20	F. By-Pass	By-Pass over U. S. 40 West	2.244	4 Sp. St. Beam Bridge Dual	8-27-57	246,915
F-490-16	F. By-Pass	Motter Avenue (Md. 74) over	—	4 Sp. St. Beam Bridge 44' Roadway	8-27-57	231,887
F-490-18	F. By-Pass	Over 4th Street	—			
F-490-18	F. By-Pass	Over 7th Street	—			
F-490-12	F. By-Pass	0.14 Mi. S. of U. S. 40 northeast	3.610	2-3 Sp. St. Beam Bridge	9-3-57	178,673
(AA-519-1)	Hanover	Over Deep Creek at Race Road	1.769	Ramps, etc. Interch. at 4th St., Motter Ave. U. S. 40		
Ho-303-1	Road		0.330	Main Line 0.769 mi. Dual 1.00 Mi.-1 L. a. Spec. B.	10-1-57	1,865,718
F-508-8	Md. 194	Ceresville	—	MD. U. S. 40	10-15-57	27,521
Ho-270-2	Md. 102	St. Paul Street	—	1 Sp. Prestr. Conc. Bridge		
	Md. 144	Main Street	—			
			19.491			\$5,637,339
F-604-1	Md. 17	In Myersville	6.980	WIDENING AND RESURFACING	7-17-56	\$1,017,371
Cl-342-2	Md. 54	Manchester, Southwesterly	0.290	Wid. and Resurf. Spec. B.		
Cl-304-5	Md. 26	0.9 Mi. W. of Md. 32 through	0.340	Spec. B. Resurf. (0.29 mi. incl. in P. L. for 12 Year Program)	9-25-56	13,985
Cl-341-2	Md. 32	Sykesville	—			
F-565-2	U. S. 340	F. By-pass at Md. 78	1.140	Resurf. Spec. B.	10-2-56	19,204
F-565-4	U. S. 340	At several stream crossings	4.614	Rel. Wid. and Resurf. Spec. B.	12-26-56	1,052,943
Cl-304-6	Md. 26	0.1 Mi. W. of Winfield through	1.176	Rel. Wid. and Resurf. Spec. B.	12-26-56	258,165
Cl-341-3	Md. 97	Westminster By-Pass	3.224	Rel. Wid. and Resurf. Spec. B.	12-18-56	830,781
Cl-336-7	Md. 194	Md. 97 Taneytown	5.300	Spec. B. Resurfacing	6-30-56	130,253
Ho-292-1	Md. 32	0.13 Mi. S. of U. S. 40 toward	2.779	Widen exis. structures	9-17-57	15,215
			3.180	Wid. and Resurf. and Rel. Spec. B.	12-31-57	846,043
			5.218	Wid. and Resurf. and Rel. Spec. B.	12-31-57	993,779
			3.545	Wid. and Resurf. and Rel. Spec. B.	10-24-57	982,001
			37.786	Wid. and Resurf. Flex.	12-24-57	992,887
		Total	37.786			\$7,088,150
		GRAND TOTAL	57.277			\$12,725,489

MAINTENANCE REPORT
 JULY 1, 1956 TO JUNE 30, 1957
 DISTRICT No. 7—FISCAL YEAR 1957

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	9,756	30,232	191,739	600
Blading—Dragging	Miles	—	—	—	5
Jacking—Asphalt	Sq. yds.	—	—	—	—
Jacking—Cement Slurry	Sq. yds.	—	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	500
Joint and Crack Filling	Gals.	7,701	—	—	—
Oiling—Bituminous	Sq. yds.	—	—	131,522	2,980

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	101,663	40,660	1,240	32,288
Blading—Dragging	Miles	—	388	—	880.5
Mowing and Hand Cutting	Miles	—	—	3,426	—
Oiling—Bituminous	Sq. yds.	—	—	—	—
Removal—Excess Material	Cu. yds.	—	—	42	8,555

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	Number	17	8 Planks 1	—
Pipe and Box Culverts	Number	3	6	265
Curb and Gutter	Lin. ft.	—	—	1
Catch Basins	Number	7	—	5
Spillways, Etc.	Number	5	—	—
Bituminous Rebutt	Lin. ft.	—	—	—
Underdrain	Lin. ft.	—	—	180

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	765	71	28
Posts	Number	3,298	533	4
Cable	Lin. ft.	2,020	—	2,721
Fittings	Number	185	115	—
Paint	Gals.	312	47	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	2,296.7	475
Beautification	Sq. yds.	645,297	7,114
Brush Hauled	Loads	49	—
Removal of Debris	Truck Loads	653	169
Top-Soil	Cu. yds.	—	220
Cutting Grass	Acres	176	1,400
Trimming Trees	Number	749	—
Moving Equipment	Units	2	—
	Miles	11	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Highway Markers	Number	8,218
Surface Guide Lines	Miles	619.97
Surface Marking, Schools, R.R., Etc.	Number	59
Snow Removal	Inches Mi.	61''—3,785 Miles
Ice Treatment	Cu. yds.	7,380
		2
Traffic Lights—Cat's Eyes	Number	2,364
Snow Fence—Painted		2,100
Erected		313,780
Removed	I in. ft.	215,718
Manual Traffic Count	Hours	989

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Ditching (New)	Lin. ft.	2,160
Cleaning—Ditches	Lin. ft.	331,709
Cleaning—Pipe Culverts	Number	481
Cleaning—Box Culverts	Number	60
Cleaning—Bridges	Number	98
Cleaning—Catch Basins	Number	179
Cleaning—Miscellaneous Structures	Number	7
Riprapping	Sq. yds.	—

MAINTENANCE REPORT

JULY 1, 1957 TO JUNE 1, 1958

DISTRICT NO. 7—FISCAL YEAR 1958

Roadway Surfacing

Type of Work	Unit of Charge	Rigid J - K	Semi-Rigid I	Non-Rigid F,G,H,I	Untreated D - E
Patching	Sq. yds.	17,771	48,725	199,187	—
Blading—Dragging	Miles	—	—	—	—
Heater Planer	Feet	—	6,157	—	—
Jacking—Cement Slurry	Sq. yds.	771	—	—	—
Resurfacing—Non Bituminous	Sq. yds.	—	—	—	—
Joint and Crack Filling	Gals.	4,540	—	—	—
Oiling—Bituminous	Sq. yds.	—	27,728	325,478	—
Frost Boils	Tons	101	—	—	—

Shoulder Maintenance

	Unit of Charge	Bitum.	Stabilized	Grass	Earth
Patching	Sq. yds.	18,995	11,905.65	—	7,650
Blading—Dragging	Miles	—	412	—	833.9
C. R. Used	Tons	—	—	—	920.15
Mowing and Hand Cutting	Miles	—	—	2,721	—
Cal. Chloride	Tons	—	1.90	—	40
Removal—Excess Material	Cu. yds.	—	25	147	10,533

Maintenance—Bridges and Structures

	Unit of Charge	Repairs	Replacements	New Installations
Bridge Repairs	New Floor	6	—	—
Pipe and Box Culverts	Number	22	—	Painted—9
Curb and Gutter	Number	8	15	16
Catch Basins	Lin. ft.	6,010	217	285
Spillways, Etc.	Number	9	4	6
Bituminous Rebutt	Number	2	—	—
Underdrain	Lin. ft.	—	—	—
	Lin. ft.	—	20	484

Guard Fence

	Unit of Charge	Repairs	Replacements	New Installations
New Fence	Lin. ft.	620	95	—
Posts	Number	150	359	10
Cable	Lin. ft.	846	242	270
Fittings	Number	76	108	4
Paint	Gals.	414	23	—
Posts Painted	Number	7,154	—	—
Guard Rail Beams Painted	Lin. ft.	10,413	—	—

MAINTENANCE REPORT—Continued

Right-of-Way

Type of Work	Unit of Charge	Maintenance	
		Roadside	Park Area
Mowing, Clearing and Grubbing	Miles	2,102½	478
Beautification	Sq. yds.	186,020	550
Resetting Fence	Lin. ft.	1,350	—
Removal of Debris	Truck Loads	631	189
Top-Soil	Cu. yds.	46	—
Cutting Grass	Acres	—	1,484
Trimming Trees	Number	175	—
Moving Equipment	Units	—	—
	Miles	—	—
Trees Cut	Number	372	—
Trees Planted	Number	6,964	—
Fertilizer Spread	Tons	43.44	11
Shrubbery Planted	Number	357	—

Traffic Service

Type of Work	Unit of Charge	Maintenance
Cinder Hauled	Cu. yds.	1,138
Snipe Signs	Number	961
Highway Markers	Number	7,937
Surface Guide Lines	Miles	526.4
Surface Marking, Schools, R.R., Etc.	Number	129
Snow Removal	Inches Mi.	313"—8,970 Miles
Ice Treatment	Cu. yds.	8,718
Traffic Lights	Number	251
Snow Fence—Erected		340,689
Removed	Lin. ft.	318,527
Manual Traffic Count	Hours	1,114

Drainage (Cleaning)

Type of Work	Unit of Charge	Maintenance
Headwall Striped	Number	331
Maint. Stakes Removed	Number	538
Ditching (New)	Lin. ft.	1,700
Cleaning—Ditches	Lin. ft.	269,960
Cleaning—Pipe Culverts	Number	128
Cleaning—Box Culverts	Number	68
Cleaning—Bridges	Number	83
Cleaning—Catch Basins	Number	73
Cleaning—Streams	Number	3
Riprapping	Sq. yds.	—
Dirt Hauled	Cu. yds.	467
Cleaning—Concrete Gutter	Ft.	21,744
Retaining Wall Built	Ft.	26
Grate Installed	Number	2

RIGHT OF WAY DEPARTMENT

LEROY C. MOSER
Chief Right of Way Engineer

OFFICE RIGHT OF WAY ENGINEERS

R. DONALD WOOTEN
Administrative Assistant Right of Way Engineer

J. FRANCIS CURREN C. MAURICE HEANY
Special Asst. Right of Way Engineer Assistant Right of Way Engineer

HAINES B. FELTER ARTHUR C. PERKINS
Special Asst. Right of Way Engineer Assistant Right of Way Engineer

DISTRICT RIGHT OF WAY ENGINEERS

District #1
JAMES A. SMITH, JR.
District Right of Way Engineer

District #2
LESTER K. JENKINS
District Right of Way Engineer

District #3
LOUIS A. YOST, JR.
District Right of Way Engineer

STEPHEN M. BOJANOWSKI
Asst. Dist. Right of Way Engineer

District #4
SIDNEY J. WARD
District Right of Way Engineer

WILLIAM C. HANNON
*Asst. District Right of Way
Engineer*

District #5
WILLIAM C. KRIEGER
District Right of Way Engineer

District #6
HENRY F. FREDERICK
District Right of Way Engineer

District #7
CARL A. CLINE
District Right of Way Engineer

RIGHT OF WAY DIVISION

The Right of Way Department is responsible directly to the Commission in administrative, policy and fiscal matters and reports to the Chief Engineer on all matters pertaining to engineering. The main overall function of the Right of Way Department is the acquisition of private and public properties required for the Commission's highway construction programs.

The continuing pressure of the needed acquisitions for the Twelve-Year Program, added to the requirements of the Federal Interstate Highway Program, has compounded the work load of this Department during the past two years. This increase has been on both a quantitative and qualitative basis.

Although the main efforts of the Department must be concentrated on the acquisition of rights of way for immediately proposed projects, more and more effort and money are being directed toward acquiring properties in the more urban sections of the State for future projects.

The continuing spread of urban areas and the accompanying increase in land values make it imperative that the attempt be made to acquire as many properties as possible that will be needed for future programs before certain areas are so heavily built-up that future roadway expansions in these sections would be economically prohibitive.

The following is a condensed summary of the operations of the Department over the past several years since the inauguration of the Twelve Year Program. It is hoped in this way to present a basis of comparison by which to judge the progress of the Department during the last two years.

<i>Fiscal Year</i>	<i>Number of Rights of Way</i>	<i>Cost</i>	<i>Average Cost per Parcel</i>
1954	1,978	\$ 4,147,122	\$2,096
1955	3,266	12,575,558	3,850
1956	2,179	12,489,442	5,731
1957	2,063	14,305,601	6,935
1958	2,200	10,858,253	4,935

One of the radical changes in right of way acquisition procedures during the past two years, involving additional work for the Department, has been the operation under the new land acquisition law which went into effect June 1, 1956. Most acquisitions are now handled in accordance

with this Act (Chapter 59 of the Acts of 1956 of the General Assembly of Maryland).

During the period from June 1, 1956, to July 1, 1958, there were 974 cases referred to the Boards of Property Review for their consideration and awards. Of this number, awards have been returned in 646 cases (66%). Settlements, as a result of these awards, were made in 352 instances (52%). Of the remaining total, appeals were entered by the State Roads Commission in 220 cases and by the property owners in 91 cases.

The foregoing statistics are somewhat misleading since in many instances the Commission entered an appeal immediately upon the filing of the award. If it hadn't, it is likely that the property owners would have appealed. A total of 311 cases was set for court trials, or approximately 48 percent. This represents the number of cases (311) appealed and set for trial, compared to the total of 974 cases originally referred for hearing before the Boards of Property Review.

The Federal Interstate Highway Program has substantially increased the work load of the Department during the past two years. This program went into effect June 1, 1956. In Maryland it includes the following major projects: The Baltimore Beltway, the Washington Circumferential Highway, the Northeastern Expressway from the Baltimore City Line to the Delaware Line northeast of Elkton, the Baltimore National Pike from the Baltimore City Line to the Pennsylvania Line near Hancock, the Washington National Pike from Frederick to Washington, D. C., the Baltimore-Harrisburg Expressway from the Baltimore Beltway to the Pennsylvania Line near existing U. S. Route 111, the Jones Falls Expressway from the Baltimore City Line to the Baltimore Beltway and a new Baltimore-Washington Expressway. It is estimated that on these projects alone, the necessary rights of way will total approximately \$79,000,000.00. This does not include Interstate acquisitions within Baltimore City, which are the City's responsibilities.

As soon as the Federal program was enacted into law, the Right of Way Department was called upon to submit detailed estimates on every project in the Interstate System. As these projects have come closer to construction, the Department becomes involved in three separate operations, all of which are necessary to secure Federal monies under this Act.

After the estimate noted above is made and submitted, a formal agreement is drawn with the Bureau of Public Roads for each individual contract and an estimated amount is then allocated for the Commission's use on this particular contract. The Right of Way Department then begins to acquire the necessary properties.

As funds are expended or committed, progress vouchers are submitted to the Bureau for reimbursements. This piecemeal payment is continued until a project has finally been completed, when a final voucher is presented and a comprehensive audit made. This audit includes all payments and expenses which are subject to participation by the Federal Government.

During the two year period which is the subject of this report, the Right of Way Department has put under agreement approximately \$9,500,000, and the Commission has been reimbursed for slightly over \$5,000,000.

While the work on the Interstate System may be more eye catching than that involved in Maryland's Twelve-Year Program, the Right of Way Department is continuing the acquisitions of land needed for the latter. As a matter of fact, far more of the Department's time is spent on state projects than on those in the Interstate System.

For the 4,263 rights of way acquired during the two year biennium, it was necessary to file 566 condemnation cases. During this same period, 196 condemnation cases were tried and settlements were reached in 191 cases, after their filing.

At the end of the biennium, there were still 426 cases pending on the several Court dockets throughout the State, including cases filed prior to the beginning of the biennium. A number of cases tried and settled before trial during the biennium were also actually filed prior to July 1, 1956. Because many cases were carried over, it was necessary to analyze them over a longer period to reflect valid percentages of those cases filed and tried in relation to the total number of acquisitions.

The Twelve Year Program began on January 1, 1954, and on that date, there were outstanding 113 condemnation cases. During the four and one-half year period since the inception of the Twelve Year Program, an additional 1,328 cases have been filed, making a total of 1,441 cases filed. At the end of the biennium, June 30, 1958, 608 of these cases have been settled without trial, through further negotiation; jury awards have been made in 407 cases, leaving a remainder of 426 cases to be disposed of.

Inasmuch as 10,963 rights of way were acquired during this period, it is indicated that in 13 percent of the acquisitions, it was necessary to file condemnation proceedings. These figures also indicate that of the condemnation cases filed, an average of 60 percent was settled through further negotiations and approximately 40 percent are actually taken to trial, and it can therefore be determined that of the cases originally filed, only approximately 5 percent went to jury trial.

For each of these trials, the Right of Way Department correlated the necessary data, arranged for the appearance of expert witnesses and furnished all engineering testimony. An actual condemnation trial lasts about two days, often longer, and since a pre-trial conference usually takes one or two days, the aggregate time consumed in the preparation and conduct of each case amounts to approximately one week. Since it is necessary to use our most experienced personnel in the preparation for the trial and the presentation of testimony, this phase of operation is one of the most time-consuming aspects of the work of the Department.

Another function of the Right of Way Department is the rental of improvements on lands not immediately needed for road construction purposes. While it will be necessary in the future to remove these improvements, they presently represent an available source of income to the Commission. For instance, from July 1, 1956 to June 30, 1958, the Commission collected \$415,000.00 in rentals, from an average of 265 properties under lease. Right of Way personnel is responsible for securing tenants for these properties, negotiating leases, arranging for and supervising necessary repairs and for terminating leases.

During this two year period, a very important change was brought about in the administrative setup of the Department. Heretofore, all right of way acquisitions were under the supervision of six Assistant Right of Way Engineers who maintained their headquarters in the Baltimore office. However, on September 1, 1957, field operations of the Department were shifted to a District level. The Right of Way Department now maintains an office in each of these districts under the direct supervision of a District Right of Way Engineer, who in turn reports to the Chief Right of Way Engineer.

In all cases the areas served by Right of Way Districts coincide with the Engineering Districts, except Washington County, which has been temporarily placed under the supervision of District 7. This county will ultimately be in District 6 as soon as trained personnel is available.

TRAFFIC DIVISION

GEORGE N. LEWIS, JR.
Director

ERNEST W. BUNTING
Highway Engineer III

GEORGE W. CASSELL
Highway Engineer III

J. LESTER MINTIENS
Highway Engineer III

TRAFFIC DIVISION

In the course of its normal operations during the two year period, the Truck Patrol stopped and weighed more than 1,500,000 trucks of which some 5,500 were found to be in violation of either the weight or size regulations and fines totalling 255,764 dollars were imposed for these violations.

A system of sufficiency ratings was established for all State-maintained highways whereby a numerical value was assigned to each section of highway.

A total of 204 requests were received from various persons for the erection of automatic traffic signals at various locations. After investigation of the facts surrounding each particular case, a total of 31 new automatic traffic signals were installed, making a total of 248 automatic traffic signals now maintained by the State Roads Commission. In addition to the new installations, adjustments and improvements were made to 20 existing traffic signals.

During the biennium the County highway maps for 4 Counties were completely redrawn and printed for distribution. In addition, 14 County highway maps were partially revised and brought up-to-date and printed for distribution.

Annual reports indicating the condition and status of the various highway systems were prepared for both the State Roads Commission and the U. S. Bureau of Public Roads.

A comprehensive review was made of the existing Federal-aid Secondary System for each of the 23 Counties in cooperation with the County Commissioners and their highway engineers.

The varied activities of the Traffic Division have increased, during this biennium, in both volume and diversity.

The various functions of the Division include: Preparation and publication of maps, erection and maintenance of traffic signals, review of construction plans for traffic operation and highway safety, traffic studies in incorporated towns, enforcement of weight and size limitations of commercial vehicles, physical inventory of roads, maintenance of regularly scheduled automatic and manual traffic counter stations, analysis of accident experience at various locations, origin and destination studies, speed zoning, plan for highway signing and marking, cooperate in design of interchanges and channelized intersections, and, plan and conduct special studies made for a great variety of purposes.

Among the major accomplishments of the Division during the period were:

Participation in the Interstate Highway Needs Study in cooperation with other Divisions.

A study was made and charts were prepared indicating the location and number of accidents by type on the Baltimore-Washington Boulevard as compared with similar statistics on the Baltimore-Washington Expressway.

In connection with a regular annual assignment and also as an adjunct to the Section 210 Study required by the Federal Highway Act of 1956 a series of Loadometer Studies were made at strategic locations throughout the State.

A special study of accidents occurring on divided highways in the immediate vicinity of underpass structures was made and a report submitted to the American Association of State Highway Officials.

**BUREAU OF RESEARCH, DESIGN STANDARDS AND
ENGINEERING TRAINING**

ALLAN LEE
Research Engineer

BUREAU OF RESEARCH, DESIGN STANDARDS AND ENGINEERING TRAINING

The functions of this Bureau are concerned principally with the research activities of the Commission, the preparation of various design standards and procedures, and the program of engineering training for the engineering personnel of the Commission.

However, the passage of the Federal Aid Highway Act of 1956 and subsequent Federal Aid legislation has necessitated many studies to be made. Although many divisions participated, this Bureau correlated most of the work incident to the studies prepared by Maryland. In addition, this Bureau very actively participated in the report which was presented to the 1958 Legislature titled "State Highway System Study, Including Sufficiency Ratings."

In addition to supervising research projects directly sponsored by this Commission, this Bureau keeps in close touch with reports and activities of the Highway Research Board, American Road Builders' Association, etc. By this exchange of information the Commission is kept well abreast of developments throughout the country.

Under the State Roads Commission-University of Maryland Research Program, an experiment designed to study various methods of controlling Erosion of Highway Slopes has progressed very well, and valuable progress reports have already been made. It is contemplated that a comprehensive semi-final report will be available this fall, and the experiment will be continued on a broader scale.

A second project under this program is one dealing with an investigation of concrete pavements which eliminate transverse joints and are continuously reinforced for very long stretches of pavement. All of the preparatory work for the investigation has been designed and fabrication of necessary instrumentation is under way. Very close examination of the physical condition of the pavement and stresses induced at various times of the year over a period of at least five years will enable us to appraise this type of construction.

**THE ADMINISTRATION OF FEDERAL AID, SPECIAL
HAULING PERMITS AND OUTDOOR ADVERTISING**

AUSTIN F. SHURE
Assistant to Chief Engineer

THE ADMINISTRATION OF FEDERAL AID, SPECIAL HAULING PERMITS AND OUTDOOR ADVERTISING

Federal Aid

Since the passage of the original Act in 1916, the Congress, by further enactments from time to time, has provided funds for the continuance of highway work through the years and up to the present time.

On or about the time of the passage of the Federal Aid Act of 1944, consideration was being given to a system of Inter-Regional highways, as it was then called, but the system did not materialize until ten years later when the first enactment was made for the use of funds on Interstate highways.

Two years following, and in 1956, provision was made by the Congress for the use of funds in substantial amounts, and for the construction of the Interstate System of Highways on the basis of the Federal Government contributing to the extent of 90% of the cost, and the respective States assuming the cost of the remaining 10%.

Although the preliminary cost of the highway improvements, such as engineering and rights of way, were eligible for participation with Federal funds, the return on Federal Primary, Urban, and Secondary projects did not justify its use because of the requirements involved, and furthermore, because there was no loss in funds. However, on the Interstate projects where the preliminary costs are relatively heavy, the Commission is entirely justified in taking advantage of the use of these funds from the inception of the project to its completion.

The Maryland Interstate System, in its entirety, was approved by the Bureau of Public Roads following recommendations by the Commission; the location as well as the design is most modern in character, and improvements are being developed which are believed will accommodate traffic requirements for a number of years in advance.

Beginning with, and subsequent to the year 1944, the Commission has received the following from the several apportionments made available by the Congress:

PRIMARY -----	\$ 29,707,676
SECONDARY -----	\$ 18,408,599
URBAN -----	\$ 30,511,757
INTERSTATE -----	\$ 57,942,434

It is significant to note that the State and the respective local governments participating in these funds have taken advantage of them in the improvement of the State and County highways to the extent that no funds have been lost to the State for highway usage, and as of June 30, 1958, the unprogrammed balances were made up of the following:

PRIMARY -----	\$	31,665
SECONDARY -----	\$	155
URBAN -----	\$	321,847
INTERSTATE -----	\$	2,190,151

Including the monies made available from the years 1916 to 1944, this represents a total allocation to the State of Maryland from the Federal Government for highway, bridge and grade crossing elimination construction an amount of \$186,189,284.

Special Hauling Permits

The control of oversize and overweight vehicles on Maryland highways has increased from a routine matter to one of prime concern. This control is being made increasingly difficult, first because of the lack of adequate laws. Regulations are largely the result of past policies and legal opinions, without basic legislative enactments.

The following table showing the number of permits issued and amounts collected indicates the ever-increasing work load of this Department.

Fiscal Year 1950	Fiscal Year 1957	Fiscal Year 1958
\$ 5,521	\$ 17,250	\$ 18,958
\$60,560	\$214,830	\$227,110

Outdoor Advertising

The Legislature of 1958 augmented the law governing outdoor advertising enacted in 1931, by setting up regulations for the control of signs and billboards adjacent to Expressways and Interstate Highways. This adds to the detail of the work involved. However, it restricts, in general, any advertising within close proximity to the main line highways. It is the first step toward a better control of roadside advertising.

The details of the work involved during the past biennium are shown in the following table.

	Fiscal Year 1957	Fiscal Year 1958
Sign License Fees.....	\$ 3,074	\$ 8,142
Fees from Sign Permit Tags	\$11,265	\$12,940
Signs of General Nature Removed from Roads.....	900	1,100
Cardboard Signs Removed.....	26,000	28,000
Signs Removed from Newly Acquired Right of Way.....	350	424

**PERSONNEL, PENSIONS, AND WORKMEN'S
COMPENSATION DIVISION**

WILLIAM P. BENDER
Director of Personnel

W. PHELPS THOMAS
Personnel Manager

KEENE C. CRESWELL
Workmen's Compensation Investigator

PERSONNEL, PENSIONS, AND WORKMEN'S COMPENSATION DIVISION

During the period of this report, some employment expansion was made by several divisions, but the total in the roads divisions has remained relatively constant. However, the opening of the Harbor Tunnel more than doubled the personnel of the Toll Facilities Department. The opening required not only a sudden increase in the toll collection and maintenance forces, but also the creation of a new series of uniformed classes, as follows:

Captain, Tunnel Patrol Force
Lieutenant, Tunnel Patrol Force
Sergeant, Tunnel Patrol Force
Harbor Tunnel Officer

The total number of employees, exclusive of the Toll Facilities Department, at June 30, 1958, was 3,204, including 2,117 salaried, and 1,087 hourly workers. Including 312 Toll Facilities employees, the grand total was 3,516 employees.

Under Workmen's Compensation, there was paid during the biennium a total, for compensation, of \$29,058, and for medical services, \$23,071. The compensation refund was \$18,234. The insurer was the State Accident Fund.

LEGAL DEPARTMENT

JOSEPH D. BUSCHER
Special Assistant Attorney General

FREDERICK A. PUDERBAUGH
Special Attorney

ROBERT S. ROTHENHOEFER
Special Attorney

EARL I. ROSENTHAL
Special Attorney

T. THORNTON MURRAY
Special Attorney

J. THOMAS NISSEL
Special Attorney

EUGENE G. RICKS
Special Attorney

WALTER W. CLAGGETT
Special Attorney

HERBERT L. COHEN
Special Attorney

LEGAL DEPARTMENT

1956

The office of the Special Assistant Attorney General to the State Roads Commission during the calendar year 1956 continued to represent and advise the Commission on all matters where legal questions were involved.

During this period this office filed 217 condemnation cases in the several Counties of the State and Baltimore City. The filing of the cases in Baltimore City was occasioned by the right of way acquisition necessary for the Baltimore Harbor Tunnel.

This office prepared and submitted to the 1956 Session of the Legislature a lengthy bill, the primary purpose of which was to deter, and, if possible, eliminate right of way speculation. Another feature of this bill was designed to relieve the crowded Court calendar of so many condemnation cases. The Boards of Property Review began to operate in August of 1956. However, they were not in full operation throughout the State for a number of months thereafter.

In addition to the condemnation cases, this office sent out 3,009 requests for title searches in the several counties and, upon receipt of the complete title searches, checked the title abstracts. Also in connection with the construction of the Baltimore Harbor Tunnel, approximately 300 title searches in Baltimore City and the surrounding counties were necessary. This office supervised the searches in connection with the Tunnel Project. The above mentioned condemnation suits, Board of Review hearings and title examinations were all in connection with the State Roads Commission Construction and Reconstruction Program, carry-over work from previous years, and work made necessary because of the construction of the Baltimore Harbor Tunnel.

Each individual expenditure for the Patapsco River Tunnel Project required this Assistant to prepare and sign a formal opinion in connection therewith.

During the calendar year 1956, 246 condemnation cases were tried or settled prior to trial in the Circuit Courts of the various counties and the Superior Court of Baltimore City. Two of the cases tried were appealed to the Court of Appeals of the State, and briefs prepared and the cases argued before that Court in order to get a judicial determination of certain legal questions.

Also, this Department represented the State Roads Commission and the Members thereof, individually, in all suits and causes of action brought against the Commission and its Members, as individuals, acting in their official capacities. In addition, this Department prepared or approved all agreements entered into between the State Roads Commission and the various counties, agencies and individuals, and approved as to legal form and sufficiency, all contracts entered into by the State Roads Commission for road construction.

As a result of the investigation into right of way speculation which came to the attention of this office in the preceding year, the members of this office further assisted in the conducting of the investigation by extensive questioning of persons involved and making certain searches in the Land Records of the counties. This required a considerable amount of time. Further it was necessary for this Assistant to assist the State's Attorney for Montgomery County in preparing the conspiracy case against the individuals indicted as a result of this investigation, and this Assistant was summoned and testified as a witness in the Criminal Case against the defendants. The defendants were found guilty and sentenced by the Court on a conspiracy charge.

The staff consisted, for 1956, of Mr. Frederick A. Puderbaugh, Mr. Robert S. Rothenhoefer, Mr. Earl I. Rosenthal, Mr. T. Thornton Murray and Mr. Herbert L. Cohen.

1957

During the calendar year 1957, this office represented and advised the Commission on all matters where legal questions were involved.

During this period, this office filed 300 condemnation cases in the several counties of the State of Maryland. In addition to the filing of these condemnation cases and the filing of petitions under the 1956 Statute which created the Boards of Property Review, this office sent out 2,355 requests for title searches in the several counties and, upon receipt of the complete title searches, reviewed and checked all of the title abstracts.

During 1957, this office tried or settled immediately prior to trial 149 condemnation cases. Also, during the year, this office represented the Commission before the various Boards of Property Review in 442 cases. The cases tried before the Courts and the Boards of Property Review were cases involving land acquisition made necessary by the Commission's 12-Year Program of Highway Construction and Reconstruction and the construction program occasioned by the passage of the Federal-Aid Highway Act of 1956. The cases also involved land acquisitions made necessary because of the construction of the Baltimore Harbor Tunnel. These

cases were all filed prior to 1957. However, many of them were tried during the calendar year 1957. As a result of the trial of condemnation cases during this period, a number of cases were appealed to the Court of Appeals of Maryland either by the Commission or by the property owners. In each of these cases, this office represented the Commission before the Appellate Court.

This Department represented the State Roads Commission and the Members thereof, individually, in all suits and causes of action brought against the Commission and its Members as individuals acting in their official capacities. Further this office prepared and approved all agreements entered into between the State Roads Commission and the various counties, agencies and individuals, and approved as to legal form and sufficiency all contracts entered into by the State Roads Commission for road construction, reconstruction, maintenance, the obtaining of material and supplies and the services of the Consulting Engineers who performed engineering work for the Commission.

The year 1957 saw the first full year of operation by the Commission under the provisions of Chapter 59 of the Acts of the General Assembly of Maryland, 1956 Session. Under this law an entirely new method of obtaining rights of way for highway purposes was employed. This method was designed primarily to prevent land speculation by speculators who attempted, with some degree of success in the past, to obtain greater compensation for the land taken than the facts justified. A review of land acquisition under this statute reveals that the procedure is working quite successfully and it is now felt that land speculation within the State has been eliminated or effectively deterred. The same statute that provided for the new method of land acquisition also provided for the creation of Boards of Property Review in each of the counties and Baltimore City. With the exception of one county, the Boards have all been appointed throughout the State and are actually hearing and deciding cases. The exception is Charles County where the Board has been appointed but had not actually determined any cases prior to December 31, 1957.

The activities of the Commission under its 12-Year Highway Construction and Reconstruction Program, plus the additional duties of a legal nature which was occasioned by the enactment of the Federal-Aid Highway Act of 1956, made it necessary to increase its staff by two members. Mr. J. Thomas Nissel and Mr. Eugene G. Ricks were appointed in the summer of 1957 as Special Attorneys of the State Roads Commission. The remainder of the staff comprises Mr. Frederick A. Puderbaugh, Mr. Robert S. Rothenhoefer, Mr. Earl I. Rosenthal, Mr. T. Thornton Murray and Mr. Walter W. Claggett.

TOLL FACILITIES DEPARTMENT

L. J. O'DONNELL
Chief Administrative Officer

JOHNSON H. WEBSTER
Chief Maintenance Officer

SUPERVISORS—ACCOUNTING DEPARTMENT

HOWARD J. McNAMARA, *Accountant I*

H. DWIGHT WAHAUS, *Accountant II*

WALTER A. STAIRIKER, *Accountant III*

EDWARD F. HEROLD, *Accountant III*

TOLL FACILITIES DEPARTMENT

Five revenue projects were operated and maintained by the State Roads Commission through the Toll Facilities Department during the biennium reviewed in this report—the Susquehanna River Toll Bridge, the Potomac River Toll Bridge, the Chesapeake Bay Toll Bridge, the Patapsco (Baltimore Harbor) Tunnel and the Williamsport Toll Bridge.

Aggregate toll revenues from the five projects during the two-year period totaled \$19,952,567.14 for 33,797,111 vehicular crossings, an increase of \$3,735,131.14 in gross income over the 1955-1956 biennium, and an increase of 5,537,787 in the number of vehicular crossings.

Under terms of an Act of the General Assembly of 1953 pursuant to which the Williamsport Toll Bridge was acquired by purchase from the Washington-Berkeley Bridge Company on January 8, 1954, the structure was freed of tolls on March 31, 1958, its revenues having aggregated the purchase price plus the costs of maintenance and operation to that date. From January 8, 1954, to March 31, 1958, the gross revenues of the bridge totaled \$1,016,270.13.

The four major toll revenue facilities—the Chesapeake Bay, Susquehanna and Potomac River Bridges, and the Patapsco Tunnel which opened to traffic on November 30, 1957, are administered, operated and maintained under terms of a Trust Agreement.

With the completion of the Administration Building and the toll plaza on the Fairfield approach of the tunnel, the administrative, accounting and maintenance headquarters of the overall operation were moved in August 1957, to the centralized location afforded by the new structure.

In late October and during November of 1957, the operating, patrol and maintenance forces of the new tunnel were organized and trained for its opening to traffic at 12:01 A.M., November 30.

During the biennium under review, a new bituminous concrete wearing surface was placed on the Susquehanna River Bridge over the original decking which had seen sixteen years' service. Plans also were prepared for revision of the East Approach of the Chesapeake Bay Bridge, to provide freer turning movements at the Stevensville intersection of U. S. Route 50 and Maryland Route 33, and easier access to the Bay Span for through traffic.

Tolls at the Susquehanna River and Chesapeake Bay Bridges were revised as of November 1, 1957: the cash fares for passenger vehicles and some trucks at the former were increased slightly, while extra passenger

fares were eliminated at the latter structure, except for passengers in buses.

Both traffic and revenues of all five projects were affected by the numerous snowstorms during the 1957-1958 winter along the Atlantic Seaboard.

Traffic over the Susquehanna River Bridge during the 1957-1958 biennium declined by 282,745 vehicles to a total of 17,209,376 and produced \$3,459,178.40 in revenue, or an increase of \$100,534.44 over the previous two-year period as the result of the increase in toll rates. Of the total crossings for the period under review, 13,861,219 were by passenger vehicles, 3,348,157 by trucks, a decrease of 142,340 and 100,405 respectively in the two categories.

Vehicles using the Potomac River Bridge increased by 271,152 during the two-year period as compared with the previous biennium, producing gross revenue of \$3,947,786.00, or an increase of \$418,123.50. Traffic for this period showed increases in both the truck and passenger-vehicle classifications, there being 320,731 of the former and 3,745,722 of the latter, as contrasted with 315,089 trucks and 3,480,212 passenger vehicles during the prior biennium.

The biennial comparison of traffic and revenues of the Chesapeake Bay Bridge shows an increase in both traffic and revenues, despite the downward revision of the passenger-vehicle toll rates for eight months of the two-year period of this review.

During the 1957-1958 biennium, 5,228,680 vehicles—4,760,612 of them passenger and 468,068 trucks—crossed the span, as compared with 4,082,650 passenger cars and 407,886 trucks during the 1955-1956 period. Revenues during the 1957-1958 years aggregated \$9,483,298.45 as compared with \$8,255,717.85 for the previous 24-month period, or an increase for the biennium of \$1,227,580.60.

Over the seven months' operation of Patapsco Tunnel during the 1957-1958 biennium, a total of 5,062,650 vehicles used the facility, producing gross revenue of \$2,167,784.40. Of the total traffic for this period 4,388,799 of the vehicles were passenger vehicles and 673,851 were in truck classifications.

For the 21 months it operated as a toll facility in the period of this report, both traffic and revenues increased at the Williamsport Toll Bridge. Due to increased truck usage, revenues for the 21-month period to March 31, 1958, increased by \$21,894.90 to \$475,861.95 as compared with the prior biennium. For the period from July 1, 1957, to March 31, 1958, 1,816,777 passenger vehicles and 413,175 trucks crossed the span as compared with 1,993,935 passenger cars and 385,939 trucks during the previous full biennium.

ACCOUNTING DEPARTMENT

CARL L. WANNEN, *Comptroller*

MORRIS M. BRODSKY

Assistant Comptroller

General Accounting

JAMES W. ROUNTREE, JR.

Assistant Comptroller

Procedures and Controls

CHARLES I. NORRIS

Assistant Comptroller

Budgets and Costs

SUPERVISORS—GENERAL

JOSEPH E. GERICK

MORRIS P. MARSTON

SUPERVISORS—DEPARTMENTAL

JOSEPH T. BUNN

WALTER F. MORAVETZ

HENRY L. COMBS

S. JOHN STROMER

CLEMENT M. FRANK

IRVING TAYLOR

REPORT OF THE COMPTROLLER

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November 3, 1958

TO THE HONORABLE:

ROBERT O. BONNELL, Chairman
EDGAR T. BENNETT
JOHN J. McMULLEN

Members, the State Roads Commission of Maryland

SIRS:

A report on the finances of the State Roads Commission of Maryland for the fiscal years ended June 30, 1958 and 1957, comprising financial statements and explanatory comments, is submitted herewith. The financial statements are listed in the accompanying table of contents, and the explanatory comments are as follows:

CONSTRUCTION PROGRAM PRIOR TO JULY 1, 1954,
AND GENERAL OPERATING FUND

The revenues and expenditures of this Fund for the fiscal years ended June 30, 1958 and 1957, shown in Exhibit B and Exhibit F, respectively, are summarized as follows:

	1958	1957
REVENUES:		
Participation in costs by political subdivisions and others.....	\$ 538,230.49	\$ 379,706.76
Reimbursement of the costs of enforcing weight-and-size limitations on motor vehicles.....	336,436.82	308,851.63
Federal aid.....	278,592.43	532,047.83
Tolls—Williamsport Bridge, after providing for operating expenses (Toll free after March 31, 1958)	106,588.78	230,858.54
Other.....	213,674.79	285,056.25
TOTAL REVENUES.....	<u>\$ 1,473,523.31</u>	<u>\$ 1,736,521.01</u>
EXPENDITURES:		
Construction costs.....	\$ 2,307,490.40	\$ 5,332,844.73
Cost of enforcing weight-and-size limitations on motor vehicles.....	349,644.84	310,248.45
Other.....	105,895.90	627,534.47
TOTAL EXPENDITURES.....	<u>\$ 2,763,031.14</u>	<u>\$ 6,270,627.65</u>
Excess of Expenditures Over Revenues.....	<u>\$ 1,289,507.83</u>	<u>\$ 4,534,106.64</u>
Cash Balance at Beginning of Year.....	4,481,620.15	9,015,726.79
Cash Balance at End of Year.....	<u>\$ 3,192,112.32</u>	<u>\$ 4,481,620.15</u>

The assets and liabilities of this Fund at June 30, 1958 and 1957, are shown in Exhibits A and E, respectively, and are summarized as follows:

	1958	1957
ASSETS:		
Funds with State Treasurer.....	\$ 3,192,112.32	\$ 4,481,620.15
Federal aid earnable.....	33,223,736.52	21,205,647.40
Inventories of materials and supplies.....	2,069,639.83	2,175,475.33
Roads system construction in progress, etc.....	15,485,605.66	20,996,220.87
Other	1,361,452.15	1,764,038.05
TOTAL	\$ 55,332,546.48	\$ 50,623,001.80
LIABILITIES:		
Working Fund advanced, etc.....	\$ 506,309.72	\$ 506,309.72
State equity in roads system construction in progress.....	15,485,605.66	20,996,220.87
Reserves:		
Completion of authorized projects.....	1,185,641.86	2,048,243.52
Federal aid unrealized.....	33,223,736.52	21,205,647.40
Other.....	705,536.45	1,129,608.65
Current working funds and construction projects	4,225,716.27	4,736,971.64
TOTAL.....	\$ 55,332,546.48	\$ 50,623,001.80

The item of Federal aid under Assets includes appropriations and apportionments available for programming and placing under agreement construction projects on the several Federal highway systems. The Federal aid accounts are shown in Exhibit J and supporting schedule.

Expenditures for the fiscal years under review applicable to the Construction Program Prior to July 1, 1954, are listed by projects in Exhibit K.

TWELVE-YEAR PROGRAM AND FEDERAL INTERSTATE CONSTRUCTION PROGRAM FUND

The revenues and expenditures of this Fund for the fiscal years ended June 30, 1958 and 1957, shown in Exhibit B and Exhibit F, respectively, are summarized as follows:

	1958	1957
REVENUES:		
Gasoline Tax Fund—50% Portion.....	\$ 23,678,491.79	\$ 23,531,842.11
Excise tax on issuance of certificates of title to motor vehicles, less refunds.....	9,434,507.85	10,302,124.12
TOTAL.....	\$ 33,112,999.64	\$ 33,833,966.23
Less:		
State Highway Construction Bonds Sinking Fund provision.....	\$ 12,352,859.75	\$ 11,464,546.32
Maintenance Fund supplement.....	3,300,000.00	1,800,000.00
TOTAL.....	\$ 15,652,859.75	\$ 13,264,546.32
Remainder of State tax revenues.....	\$ 17,460,139.89	\$ 20,569,419.91
Proceeds from sale of State Highway Construction Bonds excluding premium and accrued interest.....	15,000,000.00	30,000,000.00
Federal aid.....	20,404,732.83	11,506,934.55
Other.....	2,213,906.22	1,477,741.19
TOTAL REVENUES.....	\$ 55,078,778.94	\$ 63,554,095.65
EXPENDITURES:		
Construction costs.....	\$ 64,535,067.90	\$ 53,793,644.32
Other.....	1,295,608.59	393,259.47
TOTAL EXPENDITURES.....	\$ 65,830,676.49	\$ 54,186,903.79
Excess of Expenditures Over Revenues (Excess of revenues in italics).....	\$ 10,751,897.55	\$ 9,367,191.86
Cash Balance at Beginning of Year (Including investments).....	12,346,050.04	2,978,858.18
Cash Balance at End of Year (Including investments).....	\$ 1,594,152.49	\$ 12,346,050.04

The 50% portion of the Gasoline Tax Fund for the fiscal years 1958 and 1957 is the Commission's share of the motor vehicle fuel tax which is imposed at the rate of six cents a gallon. The excise tax on the issuance of certificates of title to motor vehicles represents tax revenues at the rate of 2% of the fair market value of motor vehicles for which certificates of title are issued. These revenues are pledged to the extent of debt service requirements for State Highway Construction Bonds issued by the State Roads Commission of Maryland. The remainder after debt service is subject to an annual transfer not in excess of \$4,000,000 to provide for Maintenance Fund supplement. The balance is for construction purposes.

The proceeds from the sale of State Highway Construction Bonds were currently invested in short term obligations of the United States Treasury to the extent that programmed construction expenditures permitted. The net income from Treasury obligations received in the fiscal years 1958 and 1957 amounted to \$191,704.34 and \$263,887.11, respectively.

Federal aid earnings represent that portion of project costs which was reimbursed by the Federal Government under agreements with the Bureau of Public Roads. The status of Federal aid for the periods under review is shown in Exhibit J and supporting schedule.

Schedules 5 of Exhibits B and F give details concerning participation in costs by political subdivisions and others totaling \$1,077,799.84 in 1958 and \$1,302,084.12 in 1957.

Schedules 1, 2, and 3 of Exhibit L show the authorized expenditures and actual expenditures, by counties and by projects, pertaining to the Twelve-Year Road Construction Program from inception to June 30, 1958, and these authorized expenditures and actual expenditures are summarized, by districts and by counties, in Exhibit L.

The assets and liabilities of this Fund at June 30, 1958 and 1957, are presented in Exhibits A and E, respectively, and are summarized as follows:

	1958	1957
ASSETS:		
Funds with State Treasurer	\$ 1,594,152.49	\$ 12,346,050.04
Federal aid earnable	44,573,741.92	36,755,675.00
Roads system construction costs	190,618,301.47	134,394,557.39
Future revenues encumbered	64,509,506.71	56,609,476.17
TOTAL	<u>\$301,295,702.59</u>	<u>\$240,105,758.60</u>
LIABILITIES:		
State equity in roads system construction	\$190,618,301.47	\$134,394,557.39
Reserves:		
Completion of authorized projects	66,103,659.20	68,955,526.21
Federal aid unrealized	44,573,741.92	36,755,675.00
TOTAL	<u>\$301,295,702.59</u>	<u>\$240,105,758.60</u>

The reserve for completion of authorized road construction and reconstruction projects for the fiscal years 1958 and 1957 is summarized below:

	1958	1957
Balance at beginning of year	\$ 68,955,526.21	\$ 45,180,472.12
Project expenditure authorizations, including adjustments for overruns, underruns, etc.	61,683,200.89	77,568,698.41
TOTAL	<u>\$130,638,727.10</u>	<u>\$122,749,170.53</u>
Project expenditures	64,535,067.90	53,793,644.32
Balance at end of year	<u>\$66,103,659.20</u>	<u>\$ 68,955,526.21</u>

MAINTENANCE FUND

The revenues and expenditures of this Fund for the fiscal years 1958 and 1957 as set forth in Exhibits B and F are summarized as follows:

	1958	1957
REVENUES:		
Motor Vehicle Revenue Fund—50% portion.....	\$ 5,622,106.29	\$ 6,190,836.62
Tax revenues transferred from construction funds....	3,300,000.00	1,800,000.00
Other.....	210,130.39	353,372.22
TOTAL REVENUES.....	\$ 9,132,236.68	\$ 8,344,208.84
EXPENDITURES:		
Maintenance costs.....	\$ 8,513,764.12	\$ 7,367,893.76
Operation and maintenance of Williamsport Toll Bridge.....	87,750.77	51,852.57
Capital properties acquired.....	1,008,031.21	721,011.31
Ocean beach protection.....	2,288.50	2,000.00
Other.....	20,835.24	37,338.81
TOTAL EXPENDITURES.....	\$ 9,632,669.84	\$ 8,180,096.45
Excess of Expenditures Over Revenues (Excess of revenues in italics).....	\$ 500,433.16	\$ <i>164,112.39</i>
Cash Balance at Beginning of Year.....	3,475,306.93	3,311,194.54
Cash Balance at End of Year.....	<u>\$ 2,974,873.77</u>	<u>\$ 3,475,306.93</u>

Detailed maintenance costs, by districts, are shown in Schedules 1 and 2 of Exhibit M. At January 1, 1958, the State System road miles, by districts and by counties, were as follows:

	Miles of Undivided Highway	Miles of Divided Highway
District No. 1:		
Dorchester County.....	151.18	4.51
Somerset County.....	112.37	4.86
Wicomico County.....	128.43	13.06
Worcester County.....	157.78	13.79
Total.....	<u>549.76</u>	<u>36.22</u>
District No. 2:		
Caroline County.....	151.89	.42
Cecil County.....	193.68	16.25
Kent County.....	172.68
Queen Anne's County.....	181.82	16.80
Talbot County.....	127.99
Total.....	<u>828.06</u>	<u>33.47</u>
District No. 3:		
Montgomery County.....	325.37	35.66
Prince George's County.....	258.67	37.65
Total.....	<u>584.04</u>	<u>73.31</u>
District No. 4:		
Baltimore County.....	266.68	52.32
Harford County.....	246.29	18.62
Total.....	<u>512.97</u>	<u>70.94</u>
District No. 5:		
Anne Arundel County.....	241.38	62.17
Calvert County.....	109.71
Charles County.....	218.08	9.04
St. Mary's County.....	194.38	.84
Total.....	<u>763.55</u>	<u>72.05</u>
District No. 6:		
Allegany County.....	145.40	.47
Garrett County.....	157.81
Washington County.....	222.59	.92
Total.....	<u>525.80</u>	<u>1.39</u>
District No. 7:		
Carroll County.....	165.67	10.91
Frederick County.....	283.18	23.94
Howard County.....	124.87	21.85
Total.....	<u>573.72</u>	<u>56.70</u>
GRAND TOTAL.....	<u><u>4,337.90</u></u>	<u><u>344.08</u></u>

The assets and liabilities of this Fund at June 30, 1958 and 1957, are as follows:

	1958	1957
ASSETS:		
Cash with State Treasurer.....	\$ 2,974,873.77	\$ 3,475,306.93
Accounts receivable.....		205.85
TOTAL.....	\$ 2,974,873.77	\$ 3,475,512.78
LIABILITIES:		
Deferred credit—unpresented toll tickets.....		\$ 4,878.20
Reserves:		
Completion of work on existing authorizations....	\$ 203,438.91	143,938.15
Acquisition of district garages and shops, and other capital properties, etc.....	2,760,650.54	3,316,012.82
Roadside beautification—Sign Permit Fund	10,784.32	10,477.76
Other.....		205.85
TOTAL.....	\$ 2,974,873.77	\$ 3,475,512.78

COUNTY AND MUNICIPALITY FUNDS

The revenues and expenditures within the Counties and Municipalities Tax Revenues Allocation Fund, County Maintenance Funds, and County Construction Funds administered for the benefit of the political subdivisions are summarized for the fiscal years 1958 and 1957 as follows:

	1958	1957
REVENUES:		
Gasoline Tax Fund—20% portion.....	\$ 9,471,396.72	\$ 9,412,736.82
Motor Vehicle Revenue Fund—20% portion	2,248,842.47	2,476,334.64
TOTAL.....	\$ 11,720,239.19	\$ 11,889,071.46
Less County Highway Construction Bonds Sinking Fund provision.....	597,689.31	385,425.20
Remainder.....	\$ 11,122,549.88	\$ 11,503,646.26
Proceeds from sale of County Highway Construction Bonds excluding premium and accrued interest.....	2,088,000.00	1,567,000.00
Federal aid.....	1,602,695.70	1,188,049.53
Remittances by counties.....	370,773.86	485,569.40
Other.....	4,804.06	5.33
TOTAL REVENUES.....	\$ 15,188,823.50	\$ 14,744,270.52

EXPENDITURES:

Payment of tax apportionments:		
Counties.....	\$ 8,299,961.18	\$ 8,097,456.53
Municipalities.....	955,640.97	1,057,876.97
Construction costs.....	622,415.74	678,874.10
Maintenance costs.....	1,984,625.42	2,162,316.60
Payment of net proceeds from sale of County Highway Construction Bonds to participating counties.....	2,078,174.91	1,557,344.86
Payment of Federal aid:		
Baltimore City.....	953,226.00	625,940.00
Counties.....	245,392.28	222,857.95
Other.....	70,315.72	294,405.06
TOTAL EXPENDITURES.....	\$ 15,209,752.22	\$ 14,697,072.07
Excess of Expenditures Over Revenues (Excess of revenues in italics).....	\$ 20,928.72	\$ <i>47,198.45</i>
Cash Balance at Beginning of Year.....	1,287,113.53	1,239,915.08
Cash Balance at End of Year.....	<u>\$ 1,266,184.81</u>	<u>\$ 1,287,113.53</u>

The allocation of tax revenues as to shares of counties and total shares of municipalities within each county is reflected in Schedules 1b of Exhibits B and F for the fiscal years 1958 and 1957, respectively. Schedules 1 and 1a of Exhibits B and F show the individual allocation accounts for counties and municipalities.

The mileage inventories of urban paved streets and county rural roads at December 1, 1957, used in distributing 1957-58 highway funds to counties and municipalities other than Baltimore City were as follows:

COUNTY	Road Mileage Basis for Computing Distributable Shares				
	County			Municipality —Urban Paved Streets Maintained	Total
	All Rural County Roads	Urban Paved Streets Maintained	Total		
Allegany.....	503.29	0.85	504.14	163.01	667.15
Anne Arundel.....	828.96	0.23	829.19	54.21	883.40
Baltimore.....	1,692.78	—	1,692.78	—	1,692.78
Calvert.....	233.01	1.05	234.06	11.72	245.78
Caroline.....	467.49	3.17	470.66	30.67	501.33
Carroll.....	761.23	1.44	762.67	51.49	814.16
Cecil.....	431.86	0.21	432.07	29.39	461.46
Charles.....	317.00	1.98	318.98	7.75	326.73
Dorchester.....	506.95	3.90	510.85	49.76	560.61
Frederick.....	984.59	2.23	986.82	102.82	1,089.64
Garrett.....	661.10	2.85	663.95	46.75	710.70
Harford.....	581.53	—	581.53	67.19	648.72
Howard.....	343.00	—	343.00	—	343.00
Kent.....	228.90	0.65	229.55	10.66	240.21
Montgomery.....	1,011.68	3.37	1,015.05	129.62	1,144.67
Prince George's.....	765.49	8.89	774.38	258.05	1,032.43
Queen Anne's.....	407.96	0.71	408.67	10.34	419.01
St. Mary's.....	338.02	0.52	338.54	2.48	341.02
Somerset.....	288.40	—	288.40	20.37	308.77
Talbot.....	285.11	1.23	286.34	35.26	321.60
Washington.....	660.54	0.31	660.85	152.06	812.91
Wicomico.....	567.06	17.01	584.07	90.18	674.25
Worcester.....	460.43	—	460.43	43.40	503.83
Total Mileage...	13,326.38	50.60	13,376.98	1,367.18	14,744.16

Certain minimum shares are prescribed by law in determining county allocations.

Revenues and expenditures of the County Maintenance Funds for the fiscal years under review are set forth in detail in Schedules 2 of Exhibits B and F. Analyses of maintenance costs by counties and by descriptive classifications are set forth in Schedules 2a of Exhibits B and F.

At December 1, 1957, the seven county road systems maintained by the State Roads Commission of Maryland comprised 2,248.21 road miles.

Revenues and expenditures of the County Construction Funds are set forth in detail in Schedules 3 of Exhibits B and F. Construction costs are shown by counties and by projects in Exhibit N.

A comparative summary of the assets and liabilities of the County and Municipality Funds combined as of June 30, 1958 and 1957, follows:

	1958	1957
ASSETS:		
Cash with State Treasurer	\$ 1,266,184.81	\$ 1,287,113.53
Federal aid earnable	170,933.00	571,784.00
Future revenues encumbered for the completion of authorized projects	238,190.54	617,794.38
TOTAL	\$ 1,675,308.35	\$ 2,476,691.91
LIABILITIES:		
Tax apportionments payable to counties	\$ 553,397.56	\$ 612,978.68
Tax apportionments payable to municipalities	515,062.22	400,763.52
Reserves:		
Completion of authorized projects	271,425.76	584,639.07
Federal aid unrealized	170,933.00	571,784.00
Current working funds and new projects	164,489.81	306,526.64
TOTAL	\$ 1,675,308.35	\$ 2,476,691.91

Exhibits A and E show in summary form the balance sheets at June 30, 1958 and 1957, respectively, for the Counties and Municipalities Tax Revenues Allocation Fund, the County Maintenance Funds, and the County Construction Funds. The balance sheets of the individual counties within each Fund are presented in Schedule 1 of those exhibits.

BONDED DEBT AND DEBT SERVICE FUNDS

The revenues and expenditures of the Sinking Funds for the fiscal years 1958 and 1957 are summarized as follows:

State Highway Construction Bonds Sinking Funds

	1958	1957
REVENUES:		
Portion of proceeds of the excise tax on certificates of title to motor vehicles and the 50% share of the Gasoline Tax Fund	\$ 12,352,859.75	\$ 11,464,546.32
Premium and accrued interest on bonds sold	45,916.66	18,799.58
Net income from United States Treasury obligations	327,766.69	299,962.59
TOTAL REVENUES	\$ 12,726,543.10	\$ 11,783,308.49
EXPENDITURES:		
Redemption of bonds	\$ 8,200,000.00	\$ 7,599,000.00
Interest on bonds	3,838,360.46	3,264,824.33
TOTAL EXPENDITURES	\$ 12,038,360.46	\$ 10,863,824.33
Excess of Revenues Over Expenditures	\$ 688,182.64	\$ 919,484.16
Balance at Beginning of Year	11,082,351.05	10,162,866.89
Balance at End of Year:		
Cash	\$ 275,440.69	\$ 219,141.56
Investment in United States Treasury obligations	11,495,093.00	10,863,209.49
	\$ 11,770,533.69	\$ 11,082,351.05

County Highway Construction Bonds Sinking Funds

	1958	1957
REVENUES:		
Portion of proceeds of the 20% shares of the Gasoline Tax Fund and the Motor Vehicle Revenue Fund.....	\$ 597,689.31	\$ 385,425.20
Premium and accrued interest on bonds sold.....	3,315.69	1,661.95
Net income from United States Treasury obligations.....	10,224.21	6,108.38
TOTAL REVENUES.....	\$ 611,229.21	\$ 393,194.63
EXPENDITURES:		
Redemption of bonds.....	\$ 130,000.00	\$ 100,000.00
Interest on bonds.....	145,077.50	89,311.25
TOTAL EXPENDITURES.....	\$ 275,077.50	\$ 189,311.25
Excess of Revenues over Expenditures.....	\$ 336,151.71	\$ 203,883.38
Balance at Beginning of Year.....	444,674.46	240,791.08
Balance at End of Year:		
Cash.....	\$ 4,657.71	\$ 8,856.41
Investment in United States Treasury obligations.....	776,168.46	435,818.05
	\$ 780,826.17	\$ 444,674.46

Revenues and expenditures of the Sinking Funds for the fiscal years under review are set forth in detail in Schedules 4 of Exhibits B and F.

Bonds sold during the two-year period were as follows:

	Par Value	Premium	Accrued Interest	Total
State Highway Construction Bonds:				
Series I dated Aug. 1, 1956.....	\$15,000,000	\$ 690.00	\$ 7,350.00	\$15,008,040.00
Series J dated Jan. 1, 1957.....	15,000,000		10,759.58	15,010,759.58
Series K dated Oct. 1, 1957.....	15,000,000		45,916.66	15,045,916.66
County Highway Construction Bonds:				
Third Series dated Aug. 1, 1956.....	1,567,000	62.68	1,598.37	1,568,661.05
Fourth Series dated, Aug 1, 1957.....	2,088,000	334.08	2,981.61	2,091,315.69
TOTAL.....	\$48,655,000	\$ 1,086.76	\$ 68,606.22	\$48,724,692.98

The following summary shows the status of bond authorizations:

Series	Date of Bonds	Average Annual Net Interest Rate	PRINCIPAL		
			Original Issue	Redemptions Through June 30, 1958	Outstanding June 30, 1958
State Highway Construction Bonds: Authorized by Legislature of 1947:					
A	Aug. 1, 1949	1.49479%	\$ 22,500,000	\$ 12,000,000	\$ 10,500,000
B	Dec. 1, 1949	1.53731%	2,500,000	2,500,000	
C	Dec. 1, 1950	1.45051%	25,000,000	11,664,000	13,336,000
D	Dec. 1, 1951	1.73046%	25,000,000	9,997,000	15,003,000
E	Aug. 1, 1953	2.58744%	25,000,000	6,664,000	18,336,000
TOTAL.....			\$100,000,000	\$ 42,825,000	\$ 57,175,000
Authorized by Legislature of 1953:					
F	Sept. 1, 1954	2.06217%	\$ 25,000,000	\$ 1,200,000	\$ 23,800,000
G	July 1, 1955	2.51084%	25,000,000	800,000	24,200,000
H	Nov. 1, 1955	2.42188%	15,000,000	600,000	14,400,000
I	Aug. 1, 1956	2.77353%	15,000,000	300,000	14,700,000
J	Jan. 1, 1957	3.59632%	15,000,000	300,000	14,700,000
K	Oct. 1, 1957	3.50626%	15,000,000		15,000,000
TOTAL.....			\$110,000,000	\$ 3,200,000	\$106,800,000
Total State Highway Construction Bonds.....			\$210,000,000	\$ 46,025,000	\$163,975,000
County Highway Construction Bonds— Authorized by Legislature of 1953:					
First	July 1, 1954	1.93353%	\$ 1,290,000	\$ 120,000	\$ 1,170,000
Second	Aug. 1, 1955	2.50165%	1,551,000	40,000	1,511,000
Third	Aug. 1, 1956	2.68473%	1,567,000	20,000	1,547,000
Fourth	Aug. 1, 1957	3.55419%	2,088,000		2,088,000
Total County Highway Construction Bonds.....			\$ 6,496,000	\$ 180,000	\$ 6,316,000

Debt service requirements for State Highway Construction Bonds and County Highway Construction Bonds outstanding at June 30, 1958, are shown in Schedules 2a and 2b, respectively, of Exhibit A.

TOLL BRIDGE AND TUNNEL FUNDS (ADMINISTERED UNDER TRUST AGREEMENTS)

The operation and maintenance of the toll facilities comprising the Susquehanna River, Potomac River, and Chesapeake Bay Bridges, and the Patapsco Tunnel (under Baltimore Harbor) is carried on under the terms of a

Trust Agreement dated as of October 1, 1954, by and between the State Roads Commission of Maryland and the Fidelity-Baltimore National Bank, as Trustee. The Trust Agreement secures the payment of \$180,000,000 par value Bridge and Tunnel Revenue Bonds.

Maryland Toll Revenue Projects Revenue Fund and Maryland Toll Revenue Projects Operations Reserve Fund

The transactions of the Revenue Fund and the Operations Reserve Fund consolidated for the fiscal years ended September 30, 1958 and 1957, are summarized as follows:

	1958	1957
REVENUES:		
Toll and Other Income:		
Susquehanna River Bridge.....	\$ 1,998,674.94	\$ 1,713,348.62
Potomac River Bridge.....	2,173,638.32	2,235,692.27
Chesapeake Bay Bridge.....	4,069,062.94	5,217,192.50
Patapsco Tunnel (opened to traffic November 30, 1957).....	3,409,654.03
Income from Investments, etc.....	138,918.94	85,388.61
TOTAL REVENUES.....	\$ 11,789,949.17	\$ 9,251,622.00
EXPENDITURES:		
Expenses of toll facilities excluding general and administrative expenses:		
Susquehanna River Bridge.....	\$ 437,168.11	\$ 314,341.28
Potomac River Bridge.....	173,360.37	150,004.37
Chesapeake Bay Bridge.....	471,696.21	244,556.06
Patapsco Tunnel.....	729,393.92
General and Administrative Expenses—net.....	232,899.27	174,480.10
Patapsco Tunnel Northern Approach Extension.....	302,211.70	292,302.58
Transfer to Interest and Sinking Fund.....	9,766,791.07	7,704,010.48
Transfer to Revolving Fund to augment expense and change funds.....	75,000.00
TOTAL EXPENDITURES.....	\$ 12,188,520.65	\$ 8,879,694.87
Excess of Expenditures Over Revenues (excess of revenues in italics).....	\$ 398,571.48	\$ 371,927.13
Adjustment to Cash Position—To convert Toll Revenues to Cash Basis (italics indicate red figures).....	38,732.68	18,577.32
Net Decrease in Cash Balance (net increase in italics).....	\$ 359,838.80	\$ 390,504.45
Cash Balance at Beginning of Year (including investment in United States Treasury obligations).....	4,255,862.21	3,865,357.76
Cash Balance at End of Year (including investment in United States Treasury obligations):		
Revenue Fund.....	\$ 451,570.20	\$ 203,204.45
Operations Reserve Fund.....	3,444,453.21	4,052,657.76
	\$ 3,896,023.41	\$ 4,255,862.21

The balance of \$451,570.20 at September 30, 1958, in the Revenue Fund comprises \$402,320.00 which is the required 20% of the 1958-59 Annual Budget of Current Expenses, and \$49,250.20 which was in transit between the toll facilities and depositories at that date.

The balance of \$3,444,453.21 at September 30, 1958, in the Operations Reserve Fund provides a reserve for paying expenses of operation, maintenance or repair, replacing equipment, insurance, and completion of construction of the Patapsco Tunnel Northern Approach Extension.

Sinking Fund Accounts

The transactions in the Sinking Fund Accounts for the fiscal years ended September 30, 1958 and 1957, are as follows:

	1958	1957
ADDITIONS:		
Income from investments	\$ 383,991.61	\$ 406,807.03
Transfers from Patapsco Tunnel Construction Fund to provide for Term Bond interest	4,025,925.00	4,253,670.00
Transfers from Revenue Fund	9,766,791.07	7,704,010.48
TOTAL ADDITIONS	\$ 14,176,707.68	\$ 12,364,487.51
DEDUCTIONS:		
Bridge and Tunnel Term Bonds purchased (including premium and accrued interest)	\$ 9,156,726.61	\$ 6,730,185.15
Payment of interest on Bridge and Tunnel Revenue Bonds	4,737,910.00	4,999,405.00
TOTAL DEDUCTIONS	\$ 13,894,636.61	\$ 11,729,590.15
Excess of Additions over Deductions	\$ 282,071.07	\$ 634,897.36
Cash Balance at Beginning of Period (including investment in United States Treasury obligations)	11,353,579.73	10,718,682.37
Cash Balance at End of Period (including investment in United States Treasury obligations):		
Bond Service Account	\$ 1,033,098.37	\$ 425,090.00
Reserve Account	9,318,140.00	9,892,781.43
Redemption Account	1,284,412.43	1,035,708.30
TOTAL	\$ 11,635,650.80	\$ 11,353,579.73

The balance of \$1,033,098.37 at September 30, 1958, in the Bond Service Account is held to apply against bond interest payable April 1, 1959.

The balance of \$9,318,140.00 at September 30, 1958, in the Reserve Account is held for the purpose of paying the interest on and the principal of the bonds whenever and to the extent that the moneys held for the credit of the Bond Service Account shall be insufficient for such purpose.

The balance of \$1,284,412.43 at September 30, 1958, in the Redemption

Account is held for application to the retirement of bonds issued under the provisions of the Trust Agreement.

Patapsco Tunnel Construction Fund

The transactions of this Fund from its inception to September 30, 1958, are summarized as follows:

REVENUES:		
Proceeds from sale of Bridge and Tunnel Revenue Bonds dated October 1, 1954, and sold December 7, 1954, including accrued interest of \$947,866.33		\$178,841,866.33
Less:		
Portion applied toward redemption of Bridge Revenue Bonds (Series 1948)	\$ 34,037,000.00	
Accrued interest from October 1, 1954, through December 7, 1954, deposited with the Trustee to the credit of Bond Service Account	947,866.33	34,984,866.33
Net Proceeds		\$143,857,000.00
Net income from United States Treasury Obligations, after deducting premium written off and other net adjustments		5,233,424.85
Sale of plans and specifications		27,756.34
TOTAL REVENUES		\$149,118,181.19
Expenditures—For construction costs—net		134,381,071.33
Balance at September 30, 1958, including cash and investments		<u>\$ 14,737,109.86</u>

The balance of \$14,737,109.86 at September 30, 1958, comprising cash of \$1,245,426.25 and investment in United States Treasury obligations of \$13,491,683.61 is subject to encumbrances of \$3,124,665.77 under existing construction contracts, leaving \$11,612,444.09 available for further construction costs and for contingencies.

General

Condensed balance sheets of the Toll Bridge and Tunnel Funds at September 30, 1958 and 1957, are as follows:

	1958	1957
ASSETS:		
Cash and investments	\$ 30,565,082.81	\$ 54,242,800.68
Capital properties	191,123,863.15	166,361,730.87
Encumbered future toll revenue, etc.	162,933,000.00	172,146,000.00
Other assets	14,743.80	12,491.85
TOTAL	<u>\$384,636,689.76</u>	<u>\$392,763,023.40</u>

LIABILITIES:

Reserves:

Created under Article V of Trust Agreement (Operating and Sinking Funds).....	\$ 15,518,118.61	\$ 15,559,619.02
Construction.....	14,902,811.87	38,577,762.01
Other.....	158,896.13	117,911.50
Bridge and Tunnel Revenue Bonds Payable.....	162,933,000.00	172,146,000.00
State equity in capital properties.....	191,123,863.15	166,361,730.87
TOTAL.....	<u>\$384,636,689.76</u>	<u>\$392,763,023.40</u>

Financial transactions pertaining to the four toll facilities administered under Trust Agreement terms are shown in the accompanying Exhibits O through V.

APPLICATION OF GASOLINE TAX AND MOTOR VEHICLE REVENUE FUNDS

Reports of the State Comptroller set forth the application of the gross receipts of the State derived in the fiscal years ended June 30, 1958 and 1957 from the motor vehicle fuel tax and from motor vehicle fees, fines, etc., and such application has been summarized as follows:

	1958	1957
Motor Vehicle Fuel Tax—Application of funds:		
Payment of refunds.....	\$ 2,758,839.36	\$ 2,884,388.12
Salaries and expenses of the Gasoline Tax Division	224,532.65	119,280.16
Shares apportioned:		
Baltimore City (30%).....	14,207,095.07	14,119,105.26
State Roads Commission for use of counties and municipalities (20%).....	9,471,396.72	9,412,736.82
State Roads Commission (50%).....	23,678,491.79	23,531,842.11
TOTAL MOTOR VEHICLE FUEL TAX.....	<u>\$ 50,340,355.59</u>	<u>\$ 50,067,352.47</u>
Motor Vehicle Fees, Fines, etc.—Application of funds:		
Payment of license refunds.....	\$ 35,559.07	\$ 40,964.85
Payment of fine refunds.....	9,000.78	7,315.25
Salaries and expenses of the Department of Motor Vehicles.....	2,709,682.84	2,262,479.79
Salaries and expenses of the Department of Maryland State Police.....	4,323,628.09	3,319,020.72
Salaries and expenses of the Traffic Court of Baltimore City.....	260,432.79	205,804.28
Salaries and expenses of the State Roads Commission of Maryland in enforcing weight-and-size limitations on motor vehicles.....	336,436.82	308,851.63
Salaries and expenses of the Maryland Traffic Safety Commission.....	83,047.40	83,817.79
Payments to counties on account of salaries and expenses of trial magistrates.....	466,713.00	418,146.00
Emergency ambulance and other use of toll facilities.....	3,000.00
Payments to counties and Baltimore City in lieu of personal property taxes.....	6,401,592.50	6,297,330.50
Shares apportioned:		
Baltimore City (30%).....	3,373,263.77	3,714,501.99
State Roads Commission for use of counties and municipalities (20%).....	2,248,842.47	2,476,334.64
State Roads Commission (50%).....	5,622,106.29	6,190,836.62
TOTAL MOTOR VEHICLE FEES, FINES, ETC.....	<u>\$ 25,873,305.82</u>	<u>\$ 25,325,404.06</u>

PERTINENT FINANCIAL INFORMATION
RELATING TO ROAD CONSTRUCTION PROGRAM

A review of the first four-year period of the Twelve-Year Road Construction Program, together with the Interstate Program, is presented below.

Revenues of \$89,943,899 from the Gasoline Tax Fund and \$40,137,838 from the Motor Vehicle Titling Tax, less transfers to the Maintenance Fund of \$9,100,000, provided a net of \$120,981,737 from which \$43,452,488 was transferred to the State Highway Construction Bonds Sinking Funds, leaving a balance of \$77,529,249 available for construction. This compares with a net of \$70,681,000 as projected in the Twelve-Year Program for the four fiscal years through June 30, 1958.

Federal aid primary system appropriations for the four fiscal years through 1958 were \$11,741,900 as compared with \$7,740,000 projected in 1952 for the four-year period.

The Program as proposed in 1952 contemplated the issuance of \$110,000,000 of State Highway Construction Bonds in the first four years of the Program; all of these bonds have been issued.

The Twelve-Year Program did not include Federal aid interstate system appropriations. Federal aid for the four years ended June 30, 1958, was appropriated for a total of \$36,696,635.

Expenditure authorizations under the Twelve-Year Program and the Interstate Program totaled \$288,405,978 for the four fiscal years ended June 30, 1958. Cash disbursements during the same period applicable to these authorizations amounted to \$222,302,319, leaving authorized expenditures yet to be made of \$66,103,659. The cash balance of \$1,594,152 at June 30, 1958, and revenues of \$64,509,507 to be derived from sale of State Highway Construction Bonds and from Federal aid are encumbered to provide for these future expenditures.

The major revenues of the Construction Fund are expected to approximate \$74,000,000 in the 1959 fiscal year. For 1960 a total of \$83,000,000 may be expected. Construction expenditure authorizations are scheduled to keep pace with indicated revenues.

Respectfully submitted,

CARL L. WANNEN,

Comptroller.

EXHIBIT A

COMBINED BALANCE SHEET, JUNE 30, 1958 (INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954, RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	TOTAL	CONSTRUCTION PROGRAM PRIOR TO JULY 1, 1954, AND GENERAL OPERATING FUND	TWELVE-YEAR PROGRAM AND FEDERAL INTERSTATE PROGRAM CONSTRUCTION FUND	MAINTENANCE FUND	COUNTY AND MUNICIPALITY FUNDS (Schedule 1)	BONDED DEBT AND DEBT SERVICE FUNDS (Schedule 2)	FIXED ASSETS (Schedule 3)
ASSETS							
CASH AND INVESTMENTS:							
Cash With State Treasurer	\$ 9,307,421.79	\$ 3,192,112.32	\$ 1,591,152.49	\$ 2,974,873.77	\$ 1,266,181.81	\$ 280,098.10	
Investment in United States Treasury obligations—Maturity value \$12,384,000—at cost	12,271,261.16					12,271,261.16	
Working Fund	500,000.00	500,000.00					
Debt Service Funds With Paying Agent for Payment of:							
Matured, bonds and interest coupons payable (including interest coupons payable July 1, 1958, \$557,612)	581,570.36					581,570.36	
Bonds payable July 1, 1958	190,000.00					190,000.00	
Accounts Receivable:	861,452.15	861,452.15					
Federal Aid:							
Under agreements	38,915,627.92		31,693,250.62		170,933.00		
Agreements in process	21,936,544.03		12,970,191.00				
Available for Agreements (Includes 1959 Apportionment)	18,016,239.19						
Installments of Materials and Supplies at cost	2,069,639.83						
Preliminary Construction Costs, Etc. (authorizations pending)	21,959.72		18,163.10				
Roads System Construction and Other Work in Progress	206,978,937.41	6,506.62	190,599,838.37				\$184,398,800.87
Roads System and Other Fixed Assets (book value)	481,398,800.87						
Future Tax Revenues Encumbered and Portions of Existing Sinking Funds Reserved for the Redemption of:							
State Highway Construction Bonds	163,575,000.00					163,575,000.00	
County Highway Construction Bonds	6,226,000.00					6,226,000.00	
TOTAL	61,717,697.25		61,599,506.71		238,190.51		
FUTURE REVENUES ENCUMBERED FOR THE COMPLETION OF AUTHORIZED PROJECTS	\$1,029,101,162.28	\$ 55,332,546.48	\$301,295,702.59	\$ 2,974,873.77	\$ 1,675,308.35	\$ 183,423,930.22	\$184,398,800.87

LIABILITIES:					
TAX APPORTIONMENTS PAYABLE TO:					
Counties.....	\$ 553,397.56			\$ 553,397.56	
Municipalities.....	515,062.22			515,062.22	
MATURED BONDS AND INTEREST COUPONS PAYABLE.....	581,570.35				\$ 581,570.36
BONDS PAYABLE:					
State Highway Construction Bonds:					
Series A, C, D, and E.....	57,175,000.00				57,175,000.00
Second Issue—Series F, G, H, I, J, and K.....	106,800,000.00				106,800,000.00
County Highway Construction Bonds—First, Second, Third, and Fourth Series.....	6,316,000.00				6,316,000.00
DUE STATE COMPTROLLER FOR WORKING FUND ADVANCED.....	500,000.00				
OTHER LIABILITIES, INCLUDING DEFERRED CREDITS.....	6,309.72	\$	5,000,000.00		
STATE EQUITY IN ROADS SYSTEM CONSTRUCTION AND OTHER WORK IN PROGRESS.....			6,309.72		
STATE EQUITY IN ROADS AND OTHER FIXED ASSETS:					
System Facilities:					
Construction Program Prior to July 1, 1954.....	441,817,929.07				\$441,817,929.07
Twelve-Year Program and Federal Interstate Program Construction Fund.....	31,684,016.59				31,684,016.59
Service Facilities.....	10,896,855.21				10,896,855.21
Reserves:					
Completion of authorized projects.....	67,764,165.73			\$ 203,438.91	271,425.76
Acquisition of capital properties.....	2,760,650.51			2,700,650.54	
Federal aid unrealized.....	77,968,411.44				
Accounts Receivable.....	692,507.49		33,223,736.52		17,033.00
Sign Permit Fund (Roadside Projects \$158,76, Unencumbered \$10,625.50).....	10,784.32		44,573,741.92		
Other.....	12,968.96		692,507.49		
SINKING FUNDS:					
State Highway Construction Bonds:					
Series A, C, D, and E.....	7,684,991.76				7,684,991.76
Second Issue—Series F, G, H, I, J, and K.....	4,085,541.93				4,085,541.93
County Highway Construction Bonds—First, Second, Third, and Fourth Series.....	780,826.17				780,826.17
CURRENT WORKING FUNDS AND NEW PROJECTS.....	4,390,206.08		4,225,716.27		
TOTAL.....	\$1,929,101,162.28	\$	55,332,546.48	\$391,246,702.59	\$ 1,675,308.35
					\$183,423,930.22
					\$184,398,800.87

NOTE—The State Roads Commission of Maryland is authorized under Sections 199 to 210, inclusive, of Article 80B of the Annotated Code of Maryland (1957 Edition) to issue from time to time until June 30, 1968, within certain limitations, a total of \$350,000,000 State Highway Construction Bonds, Second Issue, the proceeds to be used to supplement construction funds available for the twelve-year road program. At June 30, 1958, bonds of a total face amount of \$110,000,000 had been issued under this authority.

EXHIBIT A, Schedule 1

COUNTY AND MUNICIPALITY FUNDS
COMBINED BALANCE SHEET, JUNE 30, 1978

COUNTY	ASSETS				LIABILITIES				TOTAL	
	CASH WITH STATE TREASURER	FEDERAL AID APPROPRIATIONS	FUTURE REVENUES ENCUMBERED FOR THE COMPLETION OF AUTHORIZED PROJECTS	TOTAL	TAX APPROPRIATIONS PAYABLE		COMPLETION OF AUTHORIZED PROJECTS	RESERVES		NEW PROJECTS
					COUNTIES	MUNICIPALITIES				
COUNTY MAINTENANCE FUNDS:										
Calvert	\$ 18,366.10			\$ 18,366.10					\$ 18,366.10	
Cecil	16,785.88			16,785.88					16,785.88	
Charles	30,443.77			30,443.77					30,443.77	
Kent	11,847.41			11,847.41					11,847.41	
Queen Anne's	80,763.02			80,763.02					80,763.02	
St. Mary's	5,952.33			5,952.33					5,952.33	
Talbot	12,471.99			12,471.99					12,471.99	
Worcester	175.42			175.42					175.42	
TOTAL	\$ 78,718.93			\$ 78,718.93					\$ 78,718.93	
COUNTY CONSTRUCTION FUNDS:										
Allegheny	\$ 16,289.74	\$ 24,881.00	2,881.65	\$ 41,170.74			\$ 1,236.59	\$ 24,881.00	\$ 65,053.15	\$
Anne Arundel	1,014.19		10,500.00	11,514.19			1,867.46			1,867.46
Calvert	2,960.38			2,960.38			12,760.38			12,760.38
Caroline	3,751.28			3,751.28					3,751.28	
Cecil	416.86	450.00	416.86	1,283.72				450.00		450.00
Charles	1,349.84	18,540.00	11,894.41	28,184.57			9,944.57	18,540.00	29.06	28,184.57
Proctorick	29.06			29.06						29.06
Harford	26,564.25	64,721.00	105.67	91,390.92			132,238.61	64,721.00	3,621.20	196,959.64
Howard	1,144.55	2,381.00	2,381.65	5,907.20			1,240.20	8,970.00		3,621.20
Kent	41,733.57	8,970.00	9,600.79	59,304.36					41,733.57	50,703.57
Prince George's	8,660.79	4,000.00	63,812.63	76,473.42			1,000.00	40,190.00		1,000.00
Queen Anne's	11,222.74	40,190.00		51,412.74			52,580.89			92,779.89
St. Mary's	61,915.59			61,915.59			58,548.03			61,915.59
Washington	31,928.66	10,800.00	31,928.16	74,656.82				10,800.00		10,800.00
Worcester	21,836.26			21,836.26						21,836.26
TOTAL	\$ 119,006.10	\$ 170,933.00	\$ 238,190.54	\$ 528,129.64			\$ 271,425.76	\$ 170,933.00	\$ 85,770.88	\$ 528,129.64

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND:	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Allegany	176,503.42	25,245.46	151,257.96	176,503.42	35,245.46	141,257.96	176,503.42	151,257.96	176,503.42	151,257.96	176,503.42	176,503.42
Anne Arundel	72,575.06	40,329.85	31,645.21	72,575.06	40,329.85	31,645.21	72,575.06	31,645.21	72,575.06	31,645.21	72,575.06	72,575.06
Baltimore	83,000.95	83,000.95	2,861.92	83,000.95	83,000.95	2,861.92	83,000.95	2,861.92	83,000.95	2,861.92	83,000.95	83,000.95
Calvert	2,861.92	22,820.14	7,887.45	2,861.92	22,820.14	7,887.45	2,861.92	7,887.45	2,861.92	7,887.45	2,861.92	2,861.92
Caroline	30,707.29	38,024.85	12,885.87	30,707.29	38,024.85	12,885.87	30,707.29	12,885.87	30,707.29	12,885.87	30,707.29	30,707.29
Carroll	50,910.72	8,109.02	2,060.73	50,910.72	8,109.02	2,060.73	50,910.72	2,060.73	50,910.72	2,060.73	50,910.72	50,910.72
Cecil	8,109.02	2,060.73	38,217.47	8,109.02	2,060.73	38,217.47	8,109.02	38,217.47	8,109.02	38,217.47	8,109.02	8,109.02
Charles	2,060.73	25,361.56	12,855.91	2,060.73	25,361.56	12,855.91	2,060.73	12,855.91	2,060.73	12,855.91	2,060.73	2,060.73
Dorchester	38,217.47	49,688.25	25,580.17	38,217.47	49,688.25	25,580.17	38,217.47	25,580.17	38,217.47	25,580.17	38,217.47	38,217.47
Frederick	75,268.42	36,362.20	12,318.76	75,268.42	36,362.20	12,318.76	75,268.42	12,318.76	75,268.42	12,318.76	75,268.42	75,268.42
Garret	48,680.96	29,014.94	19,123.86	48,680.96	29,014.94	19,123.86	48,680.96	19,123.86	48,680.96	19,123.86	48,680.96	48,680.96
Harford	48,138.80	17,808.75	3,326.67	48,138.80	17,808.75	3,326.67	48,138.80	3,326.67	48,138.80	3,326.67	48,138.80	48,138.80
Howard	17,808.75	49,504.10	45,936.16	17,808.75	49,504.10	45,936.16	17,808.75	45,936.16	17,808.75	45,936.16	17,808.75	17,808.75
Kent	3,326.67	36,744.93	64,220.19	3,326.67	36,744.93	64,220.19	3,326.67	64,220.19	3,326.67	64,220.19	3,326.67	3,326.67
Montgomery	95,440.26	2,912.84	2,912.84	95,440.26	2,912.84	2,912.84	95,440.26	2,912.84	95,440.26	2,912.84	95,440.26	95,440.26
Prince George's	100,965.12	628.41	628.41	100,965.12	628.41	628.41	100,965.12	628.41	100,965.12	628.41	100,965.12	100,965.12
Queen Anne's	2,912.84	14,781.69	5,070.62	2,912.84	14,781.69	5,070.62	2,912.84	5,070.62	2,912.84	5,070.62	2,912.84	2,912.84
St. Mary's	628.41	11,684.80	11,684.80	628.41	11,684.80	11,684.80	628.41	11,684.80	628.41	11,684.80	628.41	628.41
Somerset	19,852.32	32,742.54	63,406.93	19,852.32	32,742.54	63,406.93	19,852.32	63,406.93	19,852.32	63,406.93	19,852.32	19,852.32
Talbot	11,684.80	28,809.09	20,548.39	11,684.80	28,809.09	20,548.39	11,684.80	20,548.39	11,684.80	20,548.39	11,684.80	11,684.80
Washington	96,149.77	49,357.48	10,740.64	96,149.77	49,357.48	10,740.64	96,149.77	10,740.64	96,149.77	10,740.64	96,149.77	96,149.77
Wicomico	49,357.48	22,557.96	10,740.64	49,357.48	22,557.96	10,740.64	49,357.48	10,740.64	49,357.48	10,740.64	49,357.48	49,357.48
Worcester	33,298.60			33,298.60			33,298.60		33,298.60		33,298.60	33,298.60
TOTAL	\$1,068,459.78	\$553,397.56	\$515,062.22	\$1,068,459.78	\$553,397.56	\$515,062.22	\$1,068,459.78	\$515,062.22	\$1,068,459.78	\$515,062.22	\$1,068,459.78	\$1,068,459.78

COUNTY MAINTENANCE FUNDS	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
COUNTY CONSTRUCTION FUNDS	78,718.93	238,190.54	170,933.00	78,718.93	238,190.54	170,933.00	78,718.93	170,933.00	78,718.93	170,933.00	78,718.93	78,718.93
COUNTY AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND	119,006.10			528,129.64			528,129.64		528,129.64		528,129.64	528,129.64
TOTAL	\$1,206,184.81	\$238,190.54	\$170,933.00	\$1,068,459.78	\$271,425.76	\$170,933.00	\$1,068,459.78	\$170,933.00	\$1,068,459.78	\$170,933.00	\$1,068,459.78	\$1,675,308.35

Italics indicate red figures.

**BONDED DEBT AND DEBT SERVICE FUNDS
COMBINED BALANCE SHEET, JUNE 30, 1958**

	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS		COUNTY HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	
	COUNTY HIGHWAY CONSTRUCTION BONDS—BOXED DEBT FUNDS		COUNTY HIGHWAY CONSTRUCTION BONDS—SINKING FUNDS	
	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	BOXED DEBT FUNDS	FIRST SERIES	SECOND SERIES
TOTAL	\$ 240,098.40	\$ 180,616.76	\$ 555.14	\$ 980.64
ASSETS				
CASH WITH STATE TREASURER				
INVESTMENT IN UNITED STATES TREASURY OBLIGATIONS—At Cost:				
Bills due July 31, 1958 (maturity value \$384,000)	382,667.52		11,947.95	
Certificates of Indebtedness, Series C, 4 1/2%, due August 1, 1958 (maturity value \$1,640,000)	1,641,250.00	1,601,250.00	128,552.37	112,503.79
Bills due September 4, 1958 (maturity value \$1,000,000)	998,282.00		10,000.00	
Bills due September 25, 1958 (maturity value \$3,000,000)	2,992,436.00			
Notes, 1 1/2%, due February 15, 1959 (maturity value \$202,000)	196,445.00			
Certificates of Indebtedness, Series B, 1 1/2%, due May 15, 1959 (maturity value \$63,000)	61,877.81		108,920.00	87,525.00
Notes, 4 1/2%, due August 1, 1961 (maturity value \$95,000)	95,178.13			61,877.81
Bonds, 2 1/2%, due June 15, 1967/62 (maturity value \$3,000,000)	2,964,218.75	2,961,218.75		
Bonds, 2 1/2%, due December 15, 1968/63 (maturity value \$2,000,000)	2,038,906.25	2,038,906.25		
DEBT SERVICE FUNDS WITH PAYING AGENT FOR PAYMENTS:				
Matured bonds and interest coupons payable (maturity value \$57,012)	581,370.36			
Matured interest coupons payable July 1, 1958, \$57,012	490,000.00	400,000.00	10,700.00	48.00
Bonds payable July 1, 1958				
Matured interest coupons payable July 1, 1958, \$57,012		6,626.06	562,473.05	
FUTURE TAX REVENUE ENCUMBERED AND PORTION OF EXISTING SINKING FUNDS RESERVED FOR THE REDEMPTION OF:				
State Highway Construction Bonds:				
Series A, C, D, and E	57,175,000.00	57,175,000.00		
Second Issue—Series F, G, H, I, J, and K	106,400,000.00	106,400,000.00		
County Highway Construction Bonds:				
First Series	1,080,000.00	1,080,000.00		
Second Series	1,511,000.00	1,511,000.00		
Third Series	1,547,000.00	1,547,000.00		
Fourth Series	2,088,000.00	2,088,000.00		
TOTAL	\$183,423,930.22	\$163,975,000.00	\$ 135,123.09	\$ 257,115.01
				\$ 194,300.03

BONDED DEBT AND DEBT SERVICE FUNDS
STATE HIGHWAY CONSTRUCTION BONDS PAYABLE, JUNE 30, 1958

DATE PAYABLE	INTEREST RATE	PRINCIPAL	
		SERIAL MATURITIES	TOTAL
SERIES A, C, D, AND E:			
SERIES A, DATED AUGUST 1, 1949:			
AUGUST 1:			
1958 to 1960 (\$1,500,000 Each)	11 ³ / ₂ %	\$ 4,500,000.00	\$10,500,000.00
1961 to 1964 (\$1,500,000 Each)	11 ³ / ₂ %	6,000,000.00	
SERIES C, DATED DECEMBER 1, 1950:			
DECEMBER 1:			
1958	11 ³ / ₂ %	\$ 1,667,000.00	13,336,000.00
1959 to 1962 (\$1,667,000 Each)	13 ³ / ₂ %	6,668,000.00	
1963 to 1965 (\$1,667,000 Each)	11 ³ / ₂ %	5,001,000.00	
SERIES D, DATED DECEMBER 1, 1951:			
DECEMBER 1:			
1958 to 1960 (\$1,667,000 Each)	11 ³ / ₂ %	\$ 5,001,000.00	15,003,000.00
1961 to 1963 (\$1,667,000 Each)	13 ³ / ₂ %	5,001,000.00	
1964 to 1966 (\$1,667,000 Each)	13 ³ / ₄ %	5,001,000.00	
SERIES E, DATED AUGUST 1, 1953:			
AUGUST 1:			
1958	21 ⁴ / ₂ %	\$ 1,666,000.00	18,336,000.00
1959 to 1961 (\$1,667,000 Each)	21 ⁴ / ₂ %	5,001,000.00	
1962 to 1966 (\$1,667,000 Each)	21 ⁴ / ₂ %	8,335,000.00	
1967 and 1968 (\$1,667,000 Each)	2.60%	3,334,000.00	
TOTAL—SERIES A, C, D, AND E			\$57,175,000.00
SECOND ISSUE—SERIES F, G, H, I, J, AND K:			
SERIES F, DATED SEPTEMBER 1, 1954:			
SEPTEMBER 1:			
1958 and 1959 (\$400,000 Each)	5 ⁰ / ₂ %	\$ 800,000.00	\$23,800,000.00
1960 and 1961 (\$400,000 Each)	11 ² / ₂ %	800,000.00	
1962	1.60%	400,000.00	
1963 and 1964 (\$400,000 Each)	13 ⁰ / ₂ %	800,000.00	
1965	1.90%	1,000,000.00	
1966	1.90%	2,000,000.00	
1967	1.90%	3,000,000.00	
1968	2 ⁰ / ₂ %	5,000,000.00	
1969	2.10%	10,000,000.00	
SERIES G, DATED JULY 1, 1955:			
JULY 1:			
1958 to 1960 (\$400,000 Each)	5 ⁰ / ₂ %	\$ 1,200,000.00	24,200,000.00
1961	1.90%	400,000.00	
1962	2 ⁰ / ₂ %	400,000.00	
1963	2.20%	400,000.00	
1964	2.30%	400,000.00	
1965	2.30%	1,000,000.00	
1966	2.30%	2,000,000.00	
1967	21 ² / ₂ %	3,000,000.00	
1968	21 ² / ₂ %	4,400,000.00	
1969	21 ² / ₂ %	1,000,000.00	
1970	21 ² / ₂ %	10,000,000.00	

EXHIBIT A, Schedule 2a—Concluded

BONDED DEBT AND DEBT SERVICE FUNDS

STATE HIGHWAY CONSTRUCTION BONDS PAYABLE, JUNE 30, 1958

DATE PAYABLE	INTEREST RATE	PRINCIPAL	
		SERIAL MATURITIES	TOTAL
SERIES H, DATED NOVEMBER 1, 1955:			
NOVEMBER 1:			
1958 to 1960 (\$300,000 Each)	5 ⁰⁰ / ₁₆	\$ 900,000.00	
1961	2 ⁰⁰ / ₁₆	300,000.00	
1962	2 ¹⁸ / ₁₆	300,000.00	
1963	2 ²⁰ / ₁₆	300,000.00	
1964	2 ¹⁴ / ₁₆	300,000.00	
1965	2 ¹⁴ / ₁₆	1,500,000.00	
1966	2 ¹⁴ / ₁₆	2,400,000.00	
1967	2 ³⁰ / ₁₆	2,500,000.00	
1968	2 ³⁸ / ₁₆	1,600,000.00	
1969	2 ⁴⁰ / ₁₆	1,700,000.00	
1970	2 ¹² / ₁₆	2,600,000.00	14,400,000.00
SERIES I, DATED AUGUST 1, 1956:			
AUGUST 1:			
1958 to 1961 (\$300,000 Each)	5 ⁰⁰ / ₁₆	\$ 1,200,000.00	
1962 to 1966 (\$300,000 Each)	2 ⁶⁰ / ₁₆	1,500,000.00	
1967 to 1970 (\$500,000 Each)	2 ⁶⁰ / ₁₆	2,000,000.00	
1971	2 ¹⁴ / ₁₆	10,000,000.00	14,700,000.00
SERIES J, DATED JANUARY 1, 1957:			
JANUARY 1:			
1959 to 1962 (\$300,000 Each)	5 ⁰⁰ / ₁₆	\$ 1,200,000.00	
1963	3 ¹⁸ / ₁₆	300,000.00	
1964	3 ¹⁴ / ₁₆	300,000.00	
1965	3 ³⁰ / ₁₆	300,000.00	
1966	3 ³⁸ / ₁₆	300,000.00	
1967	3 ⁴⁰ / ₁₆	300,000.00	
1968 and 1969 (\$1,500,000 Each)	3 ¹² / ₁₆	3,000,000.00	
1970 and 1971 (\$1,500,000 Each)	3 ⁶⁰ / ₁₆	3,000,000.00	
1972	3 ⁶⁰ / ₁₆	6,000,000.00	14,700,000.00
SERIES K, DATED OCTOBER 1, 1957:			
OCTOBER 1:			
1958 to 1965 (\$300,000 Each)	5 ⁰⁰ / ₁₆	\$ 2,400,000.00	
1966 and 1967 (\$300,000 Each)	3 ¹² / ₁₆	600,000.00	
1968 to 1971 (\$500,000 Each)	3 ¹² / ₁₆	2,000,000.00	
1972	3 ⁴⁰ / ₁₆	10,000,000.00	15,000,000.00
TOTAL—SECOND ISSUE, SERIES F, G, H, I, J, AND K			\$106,800,000.00

NOTE:—A summary of debt service requirements for all issues, by fiscal years, is as follows:

FISCAL YEAR ENDING JUNE 30	TOTAL	PRINCIPAL	INTEREST
1959	\$ 12,423,239.00	\$ 8,500,000.00	\$ 3,923,239.00
1960	12,221,116.71	8,501,000.00	3,720,116.71
1961	12,023,932.96	8,501,000.00	3,522,932.96
1962	11,841,540.67	8,501,000.00	3,340,540.67
1963	11,667,850.42	8,501,000.00	3,166,850.42
1964	11,498,854.21	8,501,000.00	2,997,854.21
1965	11,326,310.25	8,501,000.00	2,825,310.25
1966	12,037,157.75	9,401,000.00	2,636,157.75
1967	13,049,257.75	10,634,000.00	2,415,257.75
1968	14,630,313.00	12,467,000.00	2,163,313.00
1969	16,988,713.00	15,167,000.00	1,821,713.00
1970	16,655,150.00	15,200,000.00	1,455,150.00
1971	16,175,250.00	15,100,000.00	1,075,250.00
1972	17,202,250.00	16,500,000.00	702,250.00
1973	10,170,000.00	10,000,000.00	170,000.00
TOTAL	\$199,910,935.72	\$163,975,000.00	\$35,935,935.72

BONDED DEBT AND DEBT SERVICE FUNDS**COUNTY HIGHWAY CONSTRUCTION BONDS PAYABLE, JUNE 30, 1958**

DATE PAYABLE	INTEREST RATE	PRINCIPAL	
		SERIAL MATURITIES	TOTAL
FIRST SERIES, DATED JULY 1, 1954:			
JULY 1:			
1958	4%	\$ 90,000.00	
1959	1 $\frac{1}{2}$ %	90,000.00	
1960 to 1962 (\$90,000 Each)	1 $\frac{1}{2}$ %	270,000.00	
1963 to 1965 (\$100,000 Each)	1 $\frac{1}{2}$ %	300,000.00	
1966 and 1967 (\$100,000 Each)	2%	200,000.00	
1968 and 1969 (\$110,000 Each)	2%	220,000.00	\$ 1,170,000.00
SECOND SERIES, DATED AUGUST 1, 1955:			
AUGUST 1:			
1958 and 1959 (\$90,000 Each)	5%	\$ 180,000.00	
1960 and 1961 (\$90,000 Each)	2%	180,000.00	
1962	2 $\frac{10}{100}$ %	90,000.00	
1963	2 $\frac{20}{100}$ %	120,000.00	
1964 and 1965 (\$120,000 Each)	2 $\frac{30}{100}$ %	240,000.00	
1966	2 $\frac{40}{100}$ %	120,000.00	
1967	2 $\frac{1}{100}$ %	120,000.00	
1968 and 1969 (\$150,000 Each)	2 $\frac{1}{2}$ %	300,000.00	
1970	2 $\frac{1}{2}$ %	161,000.00	1,511,000.00
THIRD SERIES, DATED AUGUST 1, 1956:			
AUGUST 1:			
1958	5%	\$ 20,000.00	
1959	5%	100,000.00	
1960	3%	100,000.00	
1961 and 1962 (\$100,000 Each)	2 $\frac{40}{100}$ %	200,000.00	
1963	2 $\frac{1}{100}$ %	100,000.00	
1964 and 1965 (\$120,000 Each)	2 $\frac{1}{2}$ %	240,000.00	
1966 to 1968 (\$120,000 Each)	2 $\frac{60}{100}$ %	360,000.00	
1969 and 1970 (\$140,000 Each)	2 $\frac{70}{100}$ %	280,000.00	
1971	2 $\frac{3}{4}$ %	147,000.00	1,547,000.00
FOURTH SERIES, DATED AUGUST 1, 1957:			
AUGUST 1:			
1958 and 1959 (\$20,000 Each)	5%	\$ 40,000.00	
1960	5%	125,000.00	
1961	3 $\frac{1}{4}$ %	120,000.00	
1962	3 $\frac{1}{2}$ %	135,000.00	
1963	3 $\frac{1}{2}$ %	140,000.00	
1964	3 $\frac{1}{2}$ %	145,000.00	
1965	3 $\frac{1}{4}$ %	150,000.00	
1966	3 $\frac{30}{100}$ %	155,000.00	
1967	3 $\frac{40}{100}$ %	160,000.00	
1968	3 $\frac{40}{100}$ %	165,000.00	
1969	3 $\frac{1}{100}$ %	170,000.00	
1970	3 $\frac{1}{2}$ %	180,000.00	
1971	3 $\frac{1}{2}$ %	190,000.00	
1972	3 $\frac{1}{2}$ %	203,000.00	2,088,000.00
TOTAL			\$ 6,316,000.00

NOTE—A summary of debt service requirements for all series, by fiscal years, is as follows:

FISCAL YEAR ENDING JUNE 30	TOTAL	PRINCIPAL	INTEREST
1959	\$ 397,362.50	\$ 220,000.00	\$ 177,362.50
1960	466,500.00	300,000.00	166,500.00
1961	559,487.50	405,000.00	154,487.50
1962	553,075.00	410,000.00	143,075.00
1963	547,511.25	415,000.00	132,511.25
1964	581,090.00	460,000.00	121,090.00
1965	593,546.25	485,000.00	108,546.25
1966	585,505.00	490,000.00	95,505.00
1967	577,380.00	495,000.00	82,380.00
1968	569,042.50	500,000.00	69,042.50
1969	599,922.50	545,000.00	54,922.50
1970	609,742.50	570,000.00	39,742.50
1971	505,850.00	481,000.00	24,850.00
1972	349,451.25	337,000.00	12,451.25
1973	206,552.50	203,000.00	3,552.50
TOTAL	\$7,702,018.75	\$6,316,000.00	\$1,386,018.75

STATEMENT OF ROADS SYSTEM AND OTHER FIXED ASSETS
FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	ADDITIONS					BALANCE JUNE 30, 1958
	STATE SYSTEM CONSTRUCTION FUND		MAINTENANCE FUND	TOTAL	DEDUCTIONS	
	PROGRAM Prior To JULY 1, 1954, AND GENERAL OPERATING	TWELVE-YEAR PROGRAM				
BALANCE, JULY 1, 1957						
ROADS SYSTEM:						
Roads	\$ 100,577,125.59	\$ 7,808,339.80		\$ 15,401,313.47		\$ 115,981,139.06
Bridges (since May, 1929)	56,291,042.47	388,916.65		791,779.46		59,069,721.59
Traffic Control Facilities (since July, 1948)	521,965.98	2,107.28		28,818.69		553,781.67
TOTAL ROADS SYSTEM	\$ 157,364,034.04	\$ 8,311,323.82		\$ 16,137,911.62		\$ 173,301,945.66
Other Fixed Assets:						
Lands and Buildings	\$ 2,515,021.20		\$ 31,909.31	\$ 31,909.31	\$ 4,263.50	\$ 2,543,267.01
Engineering Equipment	332,365.71		27,938.66	27,938.66	5,467.50	351,836.87
Office Equipment	612,907.66		79,173.78	79,173.78	4,371.91	687,709.50
Shop, Storeroom, and Yard Equipment	644,568.72		83,563.76	83,563.76	64,740.66	663,421.82
Snow Fence and Posts	439,531.03		1,836.64	1,836.64	2,282.11	439,084.53
Transportation Equipment—Motor Vehicles	614,499.00		159,302.51	159,302.51	123,726.76	650,074.75
Road Maintenance and Construction Equipment:						
Motor Vehicles	3,952,282.35		369,532.89	369,532.89	59,170.26	4,262,641.98
Other Than Motor Vehicles	1,071,084.57		125,012.90	125,012.90	18,969.85	1,177,127.62
Laboratory Equipment	107,976.78		49,635.03	49,635.03	29,923.68	118,688.13
TOTAL OTHER FIXED ASSETS	\$ 10,290,837.02		\$ 918,935.48	\$ 918,935.48	\$ 312,917.29	\$ 10,896,855.21
TOTAL	\$ 467,654,871.06	\$ 8,311,323.82		\$ 17,056,847.10		\$ 481,398,909.57

NOTES:

This statement does not include construction work in progress at June 30, 1958.
The balance of \$181,398,809.87 at June 30, 1958, has not been reduced by the book value of certain capital property dispositions in prior periods not reported for record, such book value being indeterminate.

EXHIBIT B

COMBINED STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1958
(INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	TOTAL	CONSTRUCTION PROGRAM PRIOR TO JULY 1, 1954, (GENERAL OPERATING FUND)	TWELVE-MONTH PROGRAM AND FEDERAL INTERSTATE PROGRAM CONSTRUCTION FUND	MAINTENANCE FUND	COUNTY AND MUNICIPALITY FUNDS (Schedules 1,2,3)	— SINKING FUNDS (Schedule 4)
REVENUES:						
Gasoline Tax Fund:						
50% portion	\$ 23,678,494.79		\$ 14,640,271.73		\$ 9,060,308.01	\$ 9,038,220.06
20% portion	9,471,396.72		6,110,868.16			411,088.71
Excise tax on certificates of title to motor vehicles	9,431,507.85					3,314,639.69
Motor Vehicle Revenue Fund:						
50% portion	5,622,106.29			\$ 5,622,106.29		186,600.60
20% portion	2,248,842.47			87,544.92	2,062,241.87	
Tolls—Williamsport Toll Bridge (To March 31, 1958)	194,133.70	\$ 106,588.78	20,404,732.83	25,368.14	1,602,665.70	
Federal aid	22,286,020.96	278,592.43		57,668.92		
Specific work authorizations—billwork	74,631.15	74,631.15				
Sales of specifications	25,368.14					
Sale of new, old, and scrap materials, and miscellaneous income	57,668.92					
Rental of properties	224,811.88		224,811.88			
Reimbursements by counties	370,773.86				370,773.86	
Insurance recoveries	19,298.08			19,298.08		
Sign Permit Fund	12,631.31			12,631.31		
Proceeds from sale of State Highway Construction Bonds	15,045,916.66		15,000,000.00			
Proceeds from sale of County Highway Construction Bonds	2,091,315.69				2,088,000.00	15,916.66
Net income from United States Treasury obligations	529,695.24		181,532.67			33,135.69
Reimbursement from Toll System Facilities, etc. for advances	30,118.17	10,471.67				
Reimbursement of the cost of enforcing weight-and-size limitations on motor vehicles	336,436.82	30,418.17				
Collection for account of Toll System Facilities, etc.	919.45	336,436.82				
Participation in costs by political subdivisions and others (Schedule 5)	1,079,205.62	538,230.40	539,569.35	1,405.78		337,390.30
Proceeds from sale of equipment—Chesapeake Bay Toll Bridge Construction Fund Reserve	50.00		50.00			
Recovery of expenditures from miscellaneous sources	1,367,781.82	89,075.20				
Deposits by employees—clothing	5,915.00	5,915.00		5,913.24	1,804.06	
Miscellaneous	2,164.15	2,164.15				
Transfer of tax revenues to Maintenance Fund			3,300,000.00	3,300,000.00		
TOTAL REVENUES	\$ 94,211,134.74	\$ 1,473,523.31	\$ 55,078,778.94	\$ 9,132,236.08	\$ 15,188,823.50	\$ 13,337,772.31
EXPENDITURES:						
Construction costs	\$ 67,464,074.01		\$ 64,535,067.90		\$ 622,415.74	
Maintenance costs	10,498,288.24			\$ 8,513,764.12	1,984,625.42	
Operation and maintenance of Williamsport Toll Bridge	87,390.77			87,390.77		
Capital properties acquired	1,008,631.21			1,008,631.21		
Ocean beach protection	2,288.50			2,288.50		
Sign Permit Fund	12,631.25			12,624.75		
Repairs and maintenance of rental properties	8,188.71		8,188.71			
Payment of tax apportionments:						
Counties	8,299,961.18				8,299,961.18	
Municipalities	955,640.97				955,640.97	
Advances for account of Toll System Facilities, etc.	58,948.72	58,948.72				

Specific work authorized—billwork	61,086.63	61,086.63			
Federal aid apportioned to:					
Baltimore City—Urban Program	913,983.00				913,983.00
Baltimore City—Interstate Program	39,243.00				39,243.00
Carroll County—Secondary Program	49,249.00				49,249.00
Carroll County—Secondary Program	7,890.00				7,890.00
Dorchester County—Secondary Program	81,066.00				81,066.00
Frederick County—Secondary Program	48,494.82				48,494.82
Harford County—Secondary Program	36,493.00				36,493.00
Somerset County—Secondary Program	3,273.00				3,273.00
Wicomico County—Secondary Program	22,024.46				22,024.46
Funds deposited with paying agent for debt service:					
State Highway Construction Bonds:					
Series A to E, Issue:					
Maturities	6,500,000.00				\$ 6,500,000.00
Interest	1,087,235.46				1,087,235.46
Second Issue:					
Maturities	1,700,000.00				1,700,000.00
Interest	2,751,125.00				2,751,125.00
County Highway Construction Bonds, First, Second, Third, and Fourth Series:					
Maturities	130,000.00				130,000.00
Interest	148,077.50				148,077.50
Bond issue expenses:	349,644.84	349,644.84			349,644.84
Cost of enforcing weight-and-size limitations on motor vehicles			19,427.56		19,427.56
State Highway Construction Bonds, Second Issue:					
County Highway Construction Bonds, Fourth Series	19,427.56				19,427.56
Remittances of collections to Toll System Facilities, etc.	9,825.09				9,825.09
Net proceeds from sale of County Highway Construction Bonds, Fourth Series, to participating counties	919.48				919.48
Payment to Worcester County (balance of Maintenance Fund)	2,078,174.91				2,078,174.91
Net decrease (in italics) in book value of inventories of materials and supplies	55,686.57	<i>165,835.50</i>			<i>109,148.93</i>
Miscellaneous	3,998.65	1,701.40			2,297.25
TOTAL EXPENDITURES	\$104,381,782.83	\$ 2,673,955.94	\$ 64,562,684.17	\$ 9,626,756.60	\$ 123,134,437.96
EXPENDITURES subsequently recovered (see receipts)	1,367,784.82	89,075.20	1,267,992.32	5,913.24	4,804.06
TOTAL DISBURSEMENTS	\$105,749,567.65	\$ 2,763,031.14	\$ 65,830,676.49	\$ 9,632,669.84	\$ 123,134,437.96
EXCESS OF REVENUES OVER DISBURSEMENTS (Excess of disbursements in italics)	\$ 11,538,432.91	\$ 1,289,507.83	\$ 10,751,897.55	\$ 500,133.16	\$ 1,024,334.35
CASH AND INVESTMENTS, JULY 1, 1957	33,117,116.16	4,481,620.15	12,346,050.04	3,475,306.93	1,287,113.53
CASH AND INVESTMENTS, JUNE 30, 1958:					
Cash With State Treasurer	\$ 9,307,421.79	\$ 3,192,112.32	\$ 1,594,152.49	\$ 2,974,873.77	\$ 280,008.40
Investment in United States Treasury obligations	12,271,261.46				12,271,261.46
TOTAL	\$ 21,578,683.25	\$ 3,192,112.32	\$ 1,594,152.49	\$ 2,974,873.77	\$ 12,551,359.86

NOTE—This statement does not reflect the cost of United States Treasury obligations purchased, \$43,054,891.83; that portion of the proceeds from sales or redemptions representing the amounts originally invested, \$53,984,011.91; nor collections for account of the State Treasurer consisting of fees for the issuance of sign licenses, \$8,141.70, and hauling permits, \$224,050.00, applicable to the General Fund and to the Motor Vehicle Revenue Fund, respectively.

Italics indicate red figures.

EXHIBIT B, Schedule 1

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND (INCLUDING BOND PROCEEDS)
STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1958

COUNTIES	REVENUES		EXPENDITURES						TOTAL	CASH BALANCE, JUNE 30, 1958
	ALLOCATION OF 20% SHARE OF GASOLINE TAX AND MOTOR VEHICLE REVENUE FUNDS (Schedule B)	PROCEEDS FROM SALE OF COUNTY (HIGHWAY) BONDS	TOTAL AVAILABLE	PAYMENTS TO COUNTIES AND MUNICIPALITIES	COUNTY (HIGHWAY) CONSTRUCTION BONDS SINKING FUND	PAYMENTS OF COUNTY (HIGHWAY) CONSTRUCTION BOND PROCEEDS	TRANSFERS TO COUNTY MAINTENANCE FUNDS	TRANSFERS TO COUNTY CONSTRUCTION FUNDS		
Allegheny	\$ 29,577.87	\$ 400,326.52	\$ 429,904.39	\$ 392,070.27	\$ 12,588.05			\$ 404,658.03	\$ 25,245.46	
Anne Arundel	45,481.16	638,618.51	684,129.97	643,290.12				643,290.12	40,929.85	
Baltimore	91,376.80	2,055,925.51	2,150,392.31	1,660,172.12	100,658.11	\$ 746,470.83		2,067,301.05	83,000.95	
Calvert	181,124.19	211,283.01	392,407.20	371,659.12	11,748.08			383,407.20	9,000.00	
Caroline	27,371.58	367,101.68	394,473.26	374,659.12				374,659.12	22,820.14	
Carrall	607,807.00	806,925.85	1,414,732.85	524,195.71	21,082.43	190,058.76		811,470.89	58,021.85	
Cecil	345,660.90	345,660.90	345,660.90	345,660.90				345,660.90		
Charles	297,048.11	297,048.11	297,048.11	297,048.11	6,806.27			303,854.38	1,026.77	
Dorchester	30,333.18	105,463.12	135,796.60	110,035.01				125,070.02	9,726.58	
Frederick	58,522.50	790,195.20	848,717.70	693,885.26	103,144.19	286,645.12		1,083,674.57	10,688.25	
Garrett	41,751.49	576,557.57	618,309.06	506,069.16	73,890.40	209,011.39		785,970.95	36,362.20	
Harford	33,680.11	463,673.69	497,353.80	468,339.16				468,339.16	29,011.64	
Howard	20,112.36	273,640.21	293,752.57	276,243.82				276,243.82	17,508.75	
Keok	226,171.05	226,171.05	226,171.05	226,171.05				226,171.05		
Montgomery	51,611.71	787,596.73	839,208.44	1,116,849.50	92,574.20	27,470.12		1,067,313.19	10,901.10	
Prince George's	11,073.62	586,147.31	597,220.93	590,776.00				590,776.00	36,741.93	
Queen Anne's	321,937.21	321,937.21	321,937.21	321,937.21				321,937.21		
St. Mary's	298,791.35	362,349.22	661,140.57	362,349.22	31,335.61	43,597.87		435,282.70	11,857.87	
Somerset	17,271.40	230,256.56	247,527.96	(A) 234,749.27				31,081.10		
Talbot	228,872.32	228,872.32	228,872.32	228,872.32				228,872.32		
Washington	38,806.80	523,996.32	562,803.12	462,551.87	67,505.41	189,105.92		651,657.79	32,742.84	
Wicomico	31,121.58	463,690.67	494,812.25	468,922.16				468,922.16	25,890.09	
Worcester	349,645.60	349,645.60	349,645.60	327,087.64				327,087.64	22,557.96	
BOND ISSUANCE EXPENSES		9,825.00	9,825.00			9,825.00		9,825.00		
TOTAL COUNTIES	\$ 612,978.68	\$10,650,299.52	\$12,738,290.52	\$8,290,961.18	\$ 507,680.31	\$2,088,000.00		\$12,737,880.61	\$ 533,397.56	
MUNICIPALITIES	400,763.52	1,069,939.67	1,470,703.19	955,640.97				955,640.97	515,062.22	
TOTAL COUNTIES AND MUNICIPALITIES	\$1,013,742.20	\$11,720,239.19*	\$14,208,993.71	\$9,246,602.15	\$ 507,680.31	\$2,088,000.00		\$13,733,521.61	\$1,068,459.78	

(A) * Includes \$8,500.00 charged to Somerset County for the purchase of equipment.
* Includes \$597,680.31 transferred to County Highway Construction Bonds Sinking Funds.

EXHIBIT B, Schedule 1a

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND
STATEMENT OF REVENUES AND EXPENDITURES FOR ACCOUNT OF MUNICIPALITIES FOR THE FISCAL YEAR ENDED JUNE 30, 1958

MUNICIPALITY	ROAD MILES MUNICIPALITIES, DECEMBER 1956	CASH BALANCE, JULY 1, 1957	REVENUES	TOTAL FUNDS AVAILABLE	EXPENDITURES	CASH BALANCE, JUNE 30, 1958
ALLEGANY COUNTY:						
Barton	2.26	\$ 592.59	\$ 1,808.31	\$ 2,400.90	\$ 1,831.05	\$ 569.85
Cumberland	114.03	16,046.45	91,240.08	137,286.53		137,286.53
Frostburg	24.65	6,419.97	19,723.18	26,143.45	19,970.15	6,173.30
Lonaconing	5.80	1,492.94	4,640.82	6,133.76	4,661.92	1,471.84
Luke	2.98	2,458.91	2,384.42	4,843.33	2,458.91	2,384.42
Midland	2.74	726.73	2,192.39	2,919.12	2,220.16	698.96
Westernport	10.67	2,779.83	8,537.50	11,317.33	8,644.27	2,673.06
TOTAL	163.13	\$ 60,517.12	\$ 130,527.00	\$ 191,044.42	\$ 39,786.46	\$ 151,257.96
ANNE ARUNDEL COUNTY:						
Annapolis	50.76	\$ 13,973.07	\$ 40,615.15	\$ 53,688.22	\$ 22,043.01	\$ 31,645.21
CALVERT COUNTY:						
Chesapeake Beach	5.97	\$ 1,630.62	\$ 4,776.85	\$ 6,407.47	\$ 4,907.70	\$ 1,499.77
North Beach	5.40	1,497.05	4,320.75	5,817.80	4,155.65	1,362.15
TOTAL	11.37	\$ 3,127.67	\$ 9,097.60	\$ 12,225.27	\$ 9,363.35	\$ 2,861.92
CAROLINE COUNTY:						
Denton	9.40	\$ 2,446.79	\$ 7,521.33	\$ 9,968.12	\$ 7,603.24	\$ 2,364.88
Feddersburg	6.35	1,645.48	5,080.90	6,726.38	5,136.82	1,589.56
Goldsboro	.55	154.30	440.08	594.38	449.72	144.66
Greensboro	4.36	1,147.04	3,488.61	4,635.65	3,537.28	1,098.37
Henderson	.38	95.70	304.05	399.75	310.55	89.20
Hillsboro	.42	101.51	336.06	437.57	343.21	94.36
Preston	1.72	835.04	1,376.24	2,211.28	1,399.92	811.36
Ridgely	6.75	1,744.24	5,400.95	7,175.19	5,180.43	1,694.76
TOTAL	29.93	\$ 8,200.10	\$ 23,948.22	\$ 32,148.32	\$ 24,261.17	\$ 7,887.15
CARROLL COUNTY:						
Hampstead	2.00	\$ 459.07	\$ 1,600.28	\$ 2,059.35	\$ 1,572.72	\$ 486.63
Manchester	3.50	917.92	2,860.49	3,718.41	2,833.42	884.99
Mt. Airy	4.86	1,261.23	3,888.69	5,149.92	3,934.02	1,215.90
New Windsor	3.00	711.39	2,400.43	3,111.82	2,359.60	752.22
Sykesville	5.12	1,338.32	4,096.73	5,435.05	4,144.75	1,290.30
Taneytown	6.68	1,755.09	5,344.94	7,100.03	5,407.91	1,692.12
Union Bridge	5.78	1,516.42	4,624.81	6,141.23	4,679.21	1,462.02
Westminster	20.35	5,244.13	16,282.86	21,526.99	16,425.30	5,101.69
TOTAL	51.29	\$ 13,203.57	\$ 41,039.23	\$ 54,242.80	\$ 41,356.93	\$ 12,885.87
CECIL COUNTY:						
Cecilton	.70	\$ 186.29	\$ 560.10	\$ 746.39	\$ 565.01	\$ 181.38
Charlestown	3.04	786.65	2,432.42	3,219.07	2,453.04	766.03
Chesapeake City	3.07	785.35	2,456.43	3,241.78	2,477.01	764.77
Elkton	13.13	3,335.65	10,505.85	13,841.50	10,531.45	3,310.05
Northeast	4.25	1,904.75	3,400.60	5,305.35	3,300.60	2,004.75
Perryville	1.38	356.09	1,104.20	1,460.29	1,113.53	346.76
Port Deposit	.73	353.59	584.11	937.70	757.56	180.14
Rising Sun	2.24	595.13	1,792.31	2,388.44	1,833.30	555.14
TOTAL	28.54	\$ 8,304.50	\$ 22,836.02	\$ 31,140.52	\$ 23,031.50	\$ 8,109.02
CHARLES COUNTY:						
Indian Head	2.28	\$ 575.27	\$ 1,922.21	\$ 2,497.48	\$ 1,887.29	\$ 610.19
La Plata	5.50	1,416.86	4,636.90	6,053.76	4,603.22	1,450.54
TOTAL	7.78	\$ 1,992.13	\$ 6,559.11	\$ 8,551.24	\$ 6,490.51	\$ 2,060.73
DORCHESTER COUNTY:						
Cambridge	38.52	\$ 9,941.93	\$ 30,821.43	\$ 40,763.36	\$ 31,116.76	\$ 9,646.60
Eldorado	.28	75.32	224.04	299.36	228.10	71.26
Hurlock	7.16	1,859.60	5,729.01	7,588.61	5,801.25	1,787.36
Secretary	1.47	372.15	1,176.21	1,548.36	1,166.58	381.78
Vienna	2.06	1,013.06	1,648.29	2,661.35	1,692.44	968.91
TOTAL	49.49	\$ 13,262.06	\$ 39,598.98	\$ 52,861.04	\$ 40,005.13	\$ 12,855.91
FREDERICK COUNTY:						
Brunswick	16.80	\$ 4,363.98	\$ 13,442.37	\$ 17,806.35	\$ 13,564.53	\$ 4,241.82
Burkittsville	1.16	281.96	928.16	1,210.12	939.12	271.00
Emmitsburg	4.34	1,121.03	3,472.61	4,593.64	3,510.75	1,082.89

EXHIBIT B, Schedule 1a—Continued

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND

STATEMENT OF REVENUES AND EXPENDITURES FOR ACCOUNT OF MUNICIPALITIES FOR THE FISCAL YEAR ENDED JUNE 30, 1958

MUNICIPALITY	ROAD MILES MUNICIPALITIES, DECEMBER 1956	CASH BALANCE, JULY 1, 1957	REVENUES	TOTAL FUNDS AVAILABLE	EXPEN- DITURES	CASH BALANCE, JUNE 30, 1958
Frederick	56.29	14,325.88	15,039.93	59,365.81	45,213.39	14,152.42
Middletown	4.55	1,011.76	3,640.65	1,652.41	3,521.02	1,131.39
Mt. Airy	1.36	324.17	1,088.19	1,412.36	1,100.82	311.54
Myersville	1.27	25.74	1,016.18	1,041.92	742.66	299.26
New Market	1.10	293.78	880.15	1,173.93	891.20	282.73
Thurmont	8.72	2,284.31	6,977.23	9,261.54	7,063.82	2,197.72
Walkersville	3.07	814.36	2,456.43	3,270.79	2,487.19	783.60
Woodsboro	1.75	809.12	1,400.25	2,209.37	1,383.57	825.80
TOTAL	100.41	\$ 25,656.09	\$ 80,342.15	\$ 105,998.24	\$ 80,418.07	\$ 25,580.17
RETT COUNTY:						
Accident	2.11	\$ 561.79	\$ 1,688.30	\$ 2,250.09	\$ 1,697.25	\$ 552.84
Deer Park	4.11	1,043.22	3,288.58	4,331.80	3,314.12	1,017.68
Friendsville	3.57	915.62	2,856.51	3,772.13	2,862.13	880.00
Grantsville	2.77	705.72	2,216.39	2,922.11	2,219.66	702.45
Kitzmilller	3.74	886.84	2,992.52	3,879.36	2,947.17	931.89
Loch Lynn Heights	4.14	2,020.29	3,312.58	5,332.87	3,384.96	1,947.91
Mountain Lake Park	10.44	2,862.15	8,353.43	11,215.62	8,581.46	2,634.16
Oakland	11.55	3,782.03	11,612.05	15,424.08	11,772.25	3,651.83
TOTAL	45.43	\$ 12,777.66	\$ 36,350.40	\$ 49,128.06	\$ 36,809.30	\$ 12,318.76
HARFORD COUNTY:						
Aberdeen	25.27	\$ 6,427.37	\$ 20,219.57	\$ 26,646.94	\$ 20,296.29	\$ 6,350.65
Bel Air	13.38	6,419.03	10,705.88	17,115.91	10,832.28	6,283.63
Havre de Grace	25.93	6,701.84	20,747.65	27,419.49	20,959.91	6,489.58
TOTAL	61.58	\$ 19,539.24	\$ 51,673.10	\$ 71,212.34	\$ 52,088.48	\$ 19,123.86
KENT COUNTY:						
Betterton	1.86	\$ 437.95	\$ 1,855.99	\$ 2,293.94	\$ 1,704.89	\$ 589.05
Chestertown	5.13	1,691.76	5,418.28	7,110.04	5,411.30	1,698.74
Galena	.44	125.94	439.05	564.99	434.54	130.45
Millington	.84	261.27	838.19	1,099.46	829.75	269.71
Rock Hall	2.04	618.17	2,035.60	2,653.77	2,015.05	638.72
TOTAL	10.61	\$ 3,135.09	\$ 10,587.11	\$ 13,722.20	\$ 10,395.53	\$ 3,326.67
MONTGOMERY COUNTY:						
Barnesville	.15	\$ 128.70	\$ 360.07	\$ 488.77	\$ 372.18	\$ 116.59
Brookeville	.20	43.73	160.03	203.76	165.45	38.31
Chevy Chase, Section III	2.22	558.11	1,776.31	2,334.42	1,775.48	558.94
Chevy Chase, Section IV	6.24	1,696.27	4,992.88	6,599.15	5,014.95	1,584.20
Chevy Chase, Section V	1.61	786.25	1,288.23	2,074.48	1,334.94	739.54
Chevy Chase View	3.35	1,643.61	2,680.47	4,324.08	2,740.96	1,583.12
Chevy Chase Village	7.37	1,866.12	5,897.04	7,763.16	5,883.50	1,879.66
Drummond	.39	79.20	312.06	391.26	322.67	68.59
Friendship Heights	.88	240.91	704.12	945.03	727.87	217.16
Gaithersburg	5.94	1,524.18	4,752.84	6,277.02	4,811.15	1,465.87
Garrett Park	3.12	790.78	2,496.44	3,287.22	2,495.11	792.08
Glen Echo	1.74	870.73	1,397.25	2,262.98	1,455.97	807.01
Kensington	7.22	3,535.54	5,772.02	9,312.56	5,913.12	3,399.44
Laytonsville	.29	57.34	232.04	289.38	239.96	49.42
Martins Additions	2.28	697.61	1,824.32	2,431.93	1,885.87	546.06
North Chevy Chase	1.65	426.94	1,320.23	1,747.17	1,340.00	407.17
Oakmont	.52	248.32	416.07	664.39	431.22	233.17
Poolesville	.76	292.53	698.10	810.63	628.63	182.00
Rockville	52.98	13,014.02	12,391.47	55,435.49	30,528.45	24,907.04
Somerset	4.04	919.46	3,232.57	4,152.03	3,119.75	1,041.28
Takoma Park	17.69	5,029.63	11,154.49	19,184.12	14,797.85	4,476.27
Washington Grove	3.26	870.36	2,608.46	3,478.82	2,635.58	843.24
TOTAL	124.20	\$ 35,980.34	\$ 99,377.51	\$ 134,457.85	\$ 88,521.69	\$ 45,936.16
PRINCE GEORGE'S COUNTY:						
Berwyn Heights	5.88	\$ 1,415.29	\$ 4,704.83	\$ 6,120.12	\$ 4,662.21	\$ 1,457.91
Bladensburg	7.50	1,957.32	6,001.05	7,958.37	6,070.06	1,888.31
Bowie	4.19	1,129.79	3,352.59	4,482.38	3,456.77	1,025.61
Brentwood	6.82	1,833.23	5,456.96	7,290.19	5,567.18	1,723.01
Capitol Heights	7.05	1,667.63	5,641.00	7,308.63	5,563.92	1,744.71
Carrolton	2.70		2,160.38	2,160.38	1,461.11	699.27
Cheverly	11.97	3,115.90	9,577.69	12,693.59	9,663.84	3,029.75
College Park	37.31	9,352.18	29,857.26	39,205.44	29,861.82	9,343.62
Colmar Manor	3.72	980.67	2,976.53	3,957.20	3,037.06	920.14
Cottage City	2.50	653.81	2,000.35	2,654.16	2,006.69	647.47

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND

STATEMENT OF REVENUES AND EXPENDITURES FOR ACCOUNT OF MUNICIPALITIES FOR THE FISCAL YEAR ENDED JUNE 30, 1958

MUNICIPALITY	ROAD MILES MUNICIPALITIES, DECEMBER 1956	CASH BALANCE, JULY 1, 1957	REVENUES	TOTAL FUNDS AVAILABLE	EXPENDITURES	CASH BALANCE, JUNE 30, 1958
District Heights	11.78	3,087.08	9,425.66	12,512.74	9,526.77	2,985.97
Eagle Harbor	1.80	870.50	1,440.25	2,310.75	1,455.87	854.88
Edmonston	3.79	1,204.20	3,032.53	4,236.73	3,260.58	976.15
Fairmount Heights	5.14	1,348.96	4,112.73	5,461.69	4,162.93	1,298.76
Forest Heights	8.16	2,085.72	6,529.15	8,614.87	6,577.25	2,037.62
Glenarden	3.46	699.37	2,768.49	3,467.86	2,593.39	874.47
Greenbelt	13.90	3,509.23	11,121.96	14,631.19	11,139.45	3,491.74
Hvattsville	30.66	7,870.74	24,532.32	32,403.06	24,700.50	7,702.56
Landover Hills	3.97	1,113.14	3,176.56	4,289.70	3,277.75	1,011.95
Morningside	17.54	4,594.34	14,034.47	18,598.81	14,196.82	4,402.00
Mount Ranier	4.00	1,051.04	3,200.56	4,251.60	3,269.77	981.83
North Brentwood	15.21	3,927.22	12,170.15	16,097.37	12,260.96	3,836.41
Riverdale	2.23	554.62	1,784.32	2,338.94	1,799.25	539.69
Seat Pleasant	11.89	3,045.71	9,513.67	12,559.38	9,593.65	2,965.73
Takoma Park	7.40	1,911.85	5,921.04	7,832.89	5,970.48	1,862.41
University Park	8.55	2,834.62	8,800.55	11,644.17	8,895.52	2,748.65
Upper Marlboro	2.23	1,259.82	6,841.21	9,075.73	6,942.52	2,133.21
			1,784.31	3,044.13	2,007.76	1,036.37
TOTAL	252.36	\$ 65,278.50	\$ 201,923.57	\$ 267,202.07	\$ 202,981.88	\$ 64,220.19
QUEEN ANNE'S COUNTY:						
Barclay	.42	346.55	336.06	682.61	346.55	336.06
Centreville	7.09	1,825.98	5,673.00	7,498.98	5,708.11	1,790.87
Church Hill	.46	122.19	368.07	490.26	373.37	116.89
Queenstown	1.50	395.42	1,200.21	1,595.63	1,217.53	378.10
Sudlersville	1.00	263.59	800.14	1,063.73	811.66	252.07
Templeville	.10	40.68	80.01	120.69	81.84	38.85
TOTAL	10.57	\$ 2,994.41	\$ 8,457.49	\$ 11,451.90	\$ 8,539.06	\$ 2,912.84
ST. MARY'S COUNTY:						
Leonardtown	2.48	633.96	1,984.35	2,618.31	1,989.90	628.41
SOMERSET COUNTY:						
Crisfield	14.10	3,391.21	11,281.99	14,673.20	11,124.92	3,548.28
Princess Anne	6.06	1,423.59	4,848.85	6,272.44	4,750.09	1,522.35
TOTAL	20.16	\$ 4,814.80	\$ 16,130.84	\$ 20,945.64	\$ 15,875.01	\$ 5,070.63
TALBOT COUNTY:						
Easton	23.12	5,930.66	18,499.26	24,429.92	18,609.54	5,820.38
Oxford	4.19	2,044.35	3,352.59	5,396.94	3,430.58	1,966.36
St. Michaels	6.44	3,145.86	5,152.90	8,298.76	5,272.86	3,025.90
Trappe	1.09	899.40	872.16	1,771.56	899.40	872.16
TOTAL	34.84	\$ 12,020.27	\$ 27,876.91	\$ 39,897.18	\$ 28,212.38	\$ 11,684.80
WASHINGTON COUNTY:						
Boonsboro	5.43	1,133.90	4,344.76	5,478.66	4,192.37	1,376.29
Clearspring	2.14	1,037.72	1,712.30	2,750.02	1,729.95	1,020.07
Funkstown	3.20	830.67	2,560.45	3,391.12	2,602.87	788.25
Hagerstown	113.82	55,239.69	91,072.05	146,311.74	92,806.66	53,505.08
Hancock	9.00	2,317.59	7,201.27	9,518.86	7,279.77	2,239.09
Kedysville	2.87	743.32	2,296.41	3,039.73	2,338.30	701.43
Sharpsburg	5.14	1,345.53	4,112.72	5,458.25	4,181.07	1,277.18
Smithsburg	3.25	826.66	2,600.46	3,427.12	2,598.87	828.25
Williamsport	6.74	1,731.85	5,392.95	7,124.80	5,453.51	1,671.29
TOTAL	151.59	\$ 65,206.93	\$ 121,293.37	\$ 186,500.30	\$ 123,093.37	\$ 63,406.93
WICOMICO COUNTY:						
Delmar	6.15	1,609.81	4,920.86	6,530.67	4,980.88	1,549.79
Fruitland	5.78	1,490.85	4,624.82	6,115.67	4,652.83	1,462.84
Mardela Springs	3.20	814.91	2,560.45	3,375.36	2,559.46	815.90
Salisbury	66.83	17,051.53	53,473.42	70,524.95	53,796.09	16,728.86
TOTAL	81.96	\$ 20,967.10	\$ 65,579.55	\$ 86,546.65	\$ 65,998.26	\$ 20,548.39
WORCESTER COUNTY:						
Berlin	7.74	1,992.41	6,193.09	8,185.50	6,225.69	1,959.81
Ocean City	12.09	3,050.17	9,673.70	12,723.87	9,676.19	3,047.68
Pocomoke City	13.70	3,563.72	10,961.93	14,525.65	11,083.70	3,441.95
Snow Hill	9.14	2,372.31	7,313.29	9,685.60	7,394.40	2,291.20
TOTAL	42.67	\$ 10,978.61	\$ 34,142.01	\$ 45,120.62	\$ 34,379.98	\$ 10,740.64
GRAND TOTAL	1,334.15	\$ 400,763.52	\$1,069,939.67	\$1,470,703.19	\$ 955,640.97	\$ 515,062.22

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND**STATEMENT SHOWING ALLOCATION OF 20% SHARE OF GASOLINE TAX AND MOTOR VEHICLE REVENUE FUNDS TO COUNTIES AND MUNICIPALITIES FOR THE FISCAL YEAR ENDED JUNE 30, 1958**

COUNTY	ROAD MILES		ALLOCATION BASED ON TOTAL COUNTY ROAD MILES				SHARE		
	COUNTIES Excluding Municipalities)	MUNICIPALITIES	TOTAL	GASOLINE TAX	MOTOR VEHICLE REVENUE	MINIMUM SHARE ADJUSTMENT	TOTAL	COUNTIES	MUNICIPALITIES
Allegany	590.32	163.13	663.45	\$ 431,290.14	\$ 102,403.44	\$ 2,840.06	\$ 530,853.52	\$ 400,326.52	\$ 130,527.00
Anne Arundel	798.17	50.76	848.93	551,865.46	131,032.25	3,634.05	679,263.66	638,648.51	40,615.15
Baltimore	1,636.53		1,636.53	1,063,862.02	252,598.23	7,005.57	1,309,454.68	1,309,454.68	
Calvert	230.49	11.37	241.86	157,226.37	37,331.06	1,035.34	193,522.09	184,424.49	9,097.60
Caroline	458.80	29.93	488.73	317,709.60	75,435.42	2,092.12	391,052.90	367,104.68	23,948.22
Carroll	759.70	51.29	810.99	527,201.74	125,176.22	3,471.64	648,906.32	607,867.09	41,039.23
Cecil	432.00	28.54	460.54	299,384.07	71,084.30	1,971.45	368,496.92	345,660.90	22,836.02
Charles	352.34	7.78	360.12	234,103.86	55,584.48	13,919.18	303,607.52	297,048.41	6,559.11
Dorchester	506.74	19.49	526.23	361,589.44	85,854.04	2,381.08	445,062.40	405,463.42	39,598.98
Frederick	987.57	100.41	1,087.98	707,265.12	167,929.60	4,657.37	870,537.35	790,195.20	80,342.15
Garrett	720.57	45.43	766.00	497,955.00	118,232.02	3,279.05	612,907.97	576,557.57	36,350.40
Harford	579.49	64.58	644.07	418,691.75	99,412.14	2,757.10	515,346.79	463,673.69	51,673.10
Howard	341.99		341.99	222,318.06	52,786.12	1,463.97	273,640.21	273,640.21	
Kent	226.66	10.61	237.27	154,242.54	36,622.60	45,893.02	236,758.16	226,171.05	10,587.11
Montgomery	984.21	124.20	1,108.41	720,546.09	171,082.97	4,744.82	886,884.24	787,506.73	99,377.51
Prince George's	732.03	252.36	984.39	640,509.25	152,079.41	4,217.78	788,370.88	586,447.31	201,923.57
Queen Anne's	406.10	10.57	416.67	270,865.42	64,312.97	1,783.66	333,394.73	324,937.24	8,457.49
St. Mary's	335.93	2.48	338.41	219,990.80	52,233.55	1,448.65	270,775.70	268,791.35	1,984.35
Somerset	287.77	20.16	307.93	200,176.61	47,528.96	1,318.17	246,387.40	230,256.56	16,130.84
Talbot	286.04	34.84	320.88	208,595.04	49,527.80	1,372.61	256,749.23	228,872.32	27,876.91
Washington	654.88	151.59	806.47	524,263.41	124,478.57	3,452.29	645,289.69	528,996.32	121,293.37
Wicomico	579.41	81.96	661.37	429,937.99	102,082.39	2,831.16	529,189.22	463,609.67	65,579.55
Worcester	436.98	42.67	479.65	311,806.94	74,033.93	2,053.26	383,787.61	349,645.60	34,142.01
TOTAL	13,235.62	1,334.15	14,569.77	\$9,471,396.72	\$2,248,842.47		\$11,720,239.19	\$10,650,299.52	\$1,069,939.67

Italics indicate red figures.

EXHIBIT B, Schedule 2

COUNTY MAINTENANCE FUNDS

STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	REVENUES			EXPENDITURES				CASH BALANCE, JUNE 30, 1958		
	CASH BALANCE, JULY 1, 1957	REMITTANCES BY COUNTIES	TRANSFERS FROM COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND	TOTAL	TOTAL FUNDS AVAILABLE	MAINTENANCE COSTS (Schedule 2a)	PAYMENT TO COUNTY		TRANSFERS TO COUNTY CONSTRUCTION FUNDS	TOTAL
CALVERT COUNTY	\$ 46,764.27		\$ 172,965.42	\$ 172,965.42	\$ 189,729.69	\$ 171,363.59			\$ 171,363.59	\$ 18,366.10
CECIL COUNTY	89,059.85		345,660.90	345,660.90	434,720.75	417,934.87			417,934.87	16,785.88
CHARLES COUNTY	25,710.77		290,242.14	290,242.14	315,952.91	312,137.80			312,137.80	39,442.77
KENT COUNTY	40,169.05		226,171.05	226,171.05	296,340.10	202,353.71		\$ 4,258.88	206,612.59	346,396.68
QUEEN ANNES'S COUNTY	59,780.80		310,892.61	310,892.61	370,653.41	258,808.29		31,084.10	287,724.19	11,817.44
ST. MARY'S COUNTY	7,452.76	\$ 20,000.00	237,455.71	237,455.71	261,908.47	270,890.80			270,890.80	89,763.02
TALBOT COUNTY	7,195.43	69,075.89	228,872.32	237,948.21	305,143.64	317,615.63	\$ 55,086.57		262,529.06	5,462.43
WORCESTER COUNTY	56,063.88			297,948.21	59,063.88	3,552.73			55,511.15	12,471.69
TOTAL	\$ 305,206.81	\$ 89,075.89	\$ 1,812,230.15	\$ 1,901,306.04	\$ 2,296,512.85	\$ 1,684,625.42	\$ 55,086.57	\$ 87,481.63	\$ 2,127,793.92	\$ 78,718.93

Italics indicate red figures.

**COUNTY MAINTENANCE FUNDS
STATEMENT OF EXPENDITURES FOR MAINTENANCE OF COUNTY ROAD SYSTEMS
FOR THE FISCAL YEAR ENDED JUNE 30, 1958**

	GENERAL OPERATING EXPENSES										
	MATERIALS					GENERAL OPERATING EXPENSES					
	SALARIES, WAGES, AND EMPLOYERS' BENEFITS	AGGREGATES GRADED	AGGREGATES UNGRADED	LUMBER	PIPE AND PIPE BANDS	BITUMINOUS AND OTHER	SUPPLIES	RENTAL OF AUTOMOTIVE EQUIPMENT	USAGE OF SRC EQUIPMENT	CON- TRACTUAL	OTHER
CALVERT COUNTY											
Maintenance of roads—surfacing	\$ 80,858.10	\$ 2,605.08	\$ 2,500.10	\$ 9.58	\$ 8,598.35	\$ 81.56		\$ 19,818.11	\$ 4,739.26		
Maintenance of roads—oiling	11,688.26	6,675.01						1,292.28			
Maintenance of road shoulders	2,662.39	12.10						1,068.23			
Maintenance of road drainage	17,153.12			96.11	\$ 1,793.78	30.30		2,529.07			
Drainage structure repairs	163.88					1.60		14.10			
Structure repairs—other	682.55							209.90			
Maintenance of roadsides and dividing parkways	16,016.00			32.50	282.05	29.10	18.72	1,351.77			
Traffic services	11,298.56					60.73		1,717.10			
Undistributed costs:	11,266.10							3,605.00			
Vacation and other leave, pension and social security contributions, etc.	12,610.21										
County equipment operation	1,359.85										\$ 238.20
General repairs, etc.	9.76										9.76
Portion of administrative and general expenses	13,910.11										13,910.11
TOTAL	\$ 171,363.59	\$ 9,322.19	\$ 2,500.10	\$ 138.22	\$ 2,075.83	\$ 8,855.51	\$ 751.93	\$ 42,577.00	\$ 31,031.16	\$ 4,739.26	\$ 14,188.40
CECIL COUNTY											
Maintenance of roads—surfacing	\$ 114,517.77	\$ 27,191.80	\$ 1,724.10		\$ 67.65	\$ 27,006.26	\$ 310.43	\$ 95,012.54	\$ 193.31	\$ 58.77	
Maintenance of roads—oiling	82,027.88	30,082.59					90.01	3,496.58			
Maintenance of road shoulders	4,767.33							1,927.20			
Maintenance of road drainage	12,462.38			63.91	13,339.12	300.91	292.69	1,671.28			9.91
Drainage structure repairs	4,435.74	.59		2,46.68	739.80	814.32	17.23	593.31			
Structure repairs—other	1,692.16					60.24	1.99	29.40			
Maintenance of roadsides and dividing parkways	18,689.64			70.83	520.80	15.31	361.94	3,110.16			49.11
Traffic services	22,692.60					177.85	689.35	6,495.63			629.18
Maintenance of bridges (over 20-foot span)	16,618.59			6,814.13	45.71	839.92	100.60	1,118.17			665.39
Undistributed costs:											
Vacation and other leave, pension and social security contributions, etc.	35,105.98										
County equipment operation	11,189.28										
Portion of administrative and general expenses	32,485.52										32,485.52
TOTAL	\$ 417,931.87	\$ 57,574.98	\$ 2,918.30	\$ 7,195.58	\$ 14,758.46	\$ 29,200.11	\$ 7,035.67	\$ 657.50	\$ 49,020.90	\$ 37,519.15	\$ 33,298.51

CHARLES COUNTY										
Maintenance of roads—surfacing	\$ 125,740.14	\$ 70,008.81	\$ 2,451.45	\$ 1,514.05	\$ 1,800.19	\$ 21,129.04	\$ 369.43	\$ 1,236.00	\$ 28,979.33	\$ 10.00
Maintenance of roads—oiling	76,759.78	19,728.58	30,390.50				10.25		3,977.32	
Maintenance of road shoulders	1,226.99	47.58	7.45		\$ 9,306.68	563.92	309.39	130.00	213.49	
Maintenance of road drainage	57,976.56	39,320.09							6,442.76	
Drainage structure repairs	99.84				99.84					
Maintenance of roadsides and dividing parkways	11,862.30	10,082.51			7.57	247.84	26.27	7,581.50	1,486.61	
Traffic services	16,228.77	7,848.96				89.09	13.65		804.06	
Undistributed costs:										
Vacation and other leave, pension and social security contributions, etc.	23,567.10									
County equipment operation	6.75	6.75								
Portion of administrative and general expenses	28,669.57									28,669.57
TOTAL	\$ 342,137.80	\$ 171,610.41	\$ 32,852.40	\$ 1,514.05	\$ 1,907.60	\$ 9,551.52	\$ 21,021.46	\$ 8,947.50	\$ 41,996.17	\$ 22,653.13
KENT COUNTY										
Maintenance of roads—surfacing	\$ 74,555.12	\$ 38,456.70	\$ 8,418.19	\$ 1,659.50		\$ 2,276.21	\$ 6.27		\$ 23,314.98	\$ 101.67
Maintenance of roads—oiling	26,432.65	2,971.94	15,900.10				2.18		922.65	6,637.96
Maintenance of road shoulders	2,859.89	1,927.23					10.79		930.48	
Maintenance of road drainage	16,421.67	13,837.67					9.64		2,573.21	
Drainage structure repairs	5,315.81	3,047.21		3.60	\$ 414.51	\$ 851.49	277.32		690.85	16.16
Structure repairs—other	238.38	187.90			22.28	21.00	7.20		7.20	
Maintenance of roadsides and dividing parkways	18,109.96	13,621.78					63.49		3,858.13	4.95
Traffic services	8,108.72	3,240.59		2.70	50.00	507.95	5.48	\$ 3,615.00	1,251.70	1.43
Maintenance of bridges (over 20-foot span)	101.45	56.15			32.22				7.60	
Undistributed costs:										
Vacation and other leave, pension and social security contributions, etc.	20,235.48									
County equipment operation	25.66									21.37
General repairs, etc.	12,875.34	11,970.38								897.18
Portion of administrative and general expenses	17,075.58									17,075.58
TOTAL	\$ 202,353.71	\$ 109,553.03	\$ 24,318.29	\$ 1,665.80	\$ 519.04	\$ 855.45	\$ 3,082.48	\$ 3,615.00	\$ 33,586.80	\$ 6,829.63
										\$ 18,218.27

EXHIBIT B, Schedule 2a—Continued

COUNTY MAINTENANCE FUNDS
STATEMENT OF EXPENDITURES FOR MAINTENANCE OF COUNTY ROAD SYSTEMS
FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	GENERAL OPERATING EXPENSES											
	MATERIALS					RENTAL OF AUTOMOTIVE EQUIPMENT					OTHER	
	SALARIES, WAGES, AND EMPLOYEES' BENEFITS	AGGREGATES GRADED	AGGREGATES UNGRADED	LUMBER	PIPE AND PIPE BANS	BUTTIMEN'S AND OTHER	SUPPLIES	HAILING MATERIALS	DIRECT ROAD WORK	USAGE OF SRC EQUIPMENT		CONTRACTUAL
QUEEN ANNE'S COUNTY												
Maintenance of roads - surfacing	\$ 17,224.62	\$ 31,312.85	\$ 1,111.58		\$ 62.95	\$ 5,181.72	\$ 229.27			\$ 5,736.25		
Maintenance of roads - milling	59,614.83	5,884.61	21,192.11				26.30			2,558.80	\$ 24,682.68	
Maintenance of road shoulders	3,086.29	2,777.35								398.34		
Maintenance of road drainage	10,616.75	9,186.69			377.10		36.47			716.19		
Drainage structure repairs	10,072.07	1,766.51		\$ 3.26	5,111.85	17.80	.46			133.20		
Structure repairs - other	1.80									4.80		\$ 5.76
Maintenance of roadsides and dividing parkways	31,169.61	27,177.11			63.50	11.90	163.83			6,120.86		6.07
Traffic services	7,752.37	5,468.55				26.17	52.38			763.30		89.50
Undistributed costs:												
Vacation and other leave, pension and social security contributions, etc.	30,791.48											
County equipment operation	31,211.12			5.66	213.37	184.60	21,145.80			18.20		916.19
General repairs, etc.	1,215.73											
Portion of administrative and general expenses	22,956.92											22,956.92
TOTAL	\$ 258,806.29	\$ 129,608.81	\$ 25,903.72	\$ 5.17	\$ 5,861.77	\$ 6,022.58	\$ 21,981.71	\$ 1,352.08	\$ 16,110.24	\$ 24,682.68	\$ 24,682.68	\$ 23,074.57
ST. MARY'S COUNTY												
Maintenance of roads - surfacing	\$ 76,113.68	\$ 11,932.51	\$ 1,916.25			\$ 17,011.60	\$ 118.00			\$ 10,000.47		\$ 85.50
Maintenance of roads - milling	29,918.11	5,044.65	6,536.00				.23			987.20	\$ 17,350.03	
Maintenance of road shoulders	7,592.61	5,677.52	22.65			19.60	59.82			1,833.47		21.00
Maintenance of road drainage	14,305.65	12,781.12	27.00		\$ 11.68		52.75			1,192.05		
Drainage structure repairs	6,392.62	551.33		\$ 268.71	5,360.13	131.61	3.64			21.76		
Structure repairs - other	3.61											
Maintenance of roadsides and dividing parkways	21,914.95	21,318.97					221.35			314.68		85.91
Traffic services	5,048.05	1,509.92				116.52	21.92			283.70		
Maintenance of bridges (over 20-foot span)	51.16	48.79					2.37					
Undistributed costs:												
Vacation and other leave, pension and social security contributions, etc.	19,674.33	19,674.93										188.65
County equipment operation	7,916.74	166.57				34.15	7,527.37					21,568.63
Portion of administrative and general expenses	21,568.63											
TOTAL	\$ 270,890.80	\$ 174,730.31	\$ 8,996.35	\$ 268.71	\$ 5,372.11	\$ 17,316.51	\$ 8,037.45		\$ 15,003.31	\$ 17,350.03	\$ 17,350.03	\$ 21,781.72

TALBOT COUNTY											
Maintenance of roads—surfacing	\$ 155,453.01	\$ 49,357.72	\$ 24,570.71	\$ 6,916.38	\$ 111.41	\$ 2,122.03	\$ 207.21	\$ 32,005.81	\$ 11,943.00	\$ 26,097.71	\$ 1,218.00
Maintenance of roads—oilings	562.76	239.52					.58	25.00		97.06	
Maintenance of road shoulders	144.55	69.81				11.11	236.17		5,101.50	33.60	3,312.55
Maintenance of road drainage	36,431.48	19,482.32			2,976.71	196.80	89.32			5,018.93	1,988.22
Drainage structure repairs	7,621.71	916.96			4,271.65					131.16	
Maintenance of roadsides and dividing parkways	52,090.76	16,590.82			209.90	18.92	328.39	13,378.06		7,231.08	6,081.31
Traffic services	7,848.79	3,286.35			.61	14.13	25.91			1,161.29	187.58
Undistributed costs:	606.50	6.37					27.51			16.20	556.12
Vacation and other leave, pension and social security contributions, etc.	23,949.64	23,949.64				12.90	5,165.12				621.72
County equipment operation	7,733.79	1,631.05									
Portion of administrative and general expenses	25,372.91										25,372.91
TOTAL	\$ 317,615.63	\$ 115,633.59	\$ 24,570.71	\$ 6,916.38	\$ 24.91	\$ 7,575.97	\$ 6,380.24	\$ 15,408.90	\$ 28,336.67	\$ 40,900.63	\$ 39,341.71
WORCESTER COUNTY											
Maintenance of roads—surfacing	\$ 551.41	\$ 546.76									
Maintenance of roads—oilings	147.92	147.92									
Maintenance of road shoulders	13.37	13.37									
Maintenance of road drainage	515.10	515.10									
Drainage structure repairs	23.77	23.77									
Undistributed costs:											
Vacation and other leave, pension and social security contributions, etc.	1,859.91	1,859.91									
County equipment operation	87.76	61.89									
General repairs, etc.	87.12	81.81									
Portion of administrative and general expenses	262.71										262.71
TOTAL	\$ 3,552.73	\$ 3,253.89									\$ 262.71
GRAND TOTAL	\$1,981,625.12	\$ 976,462.08	\$183,538.94	\$ 17,540.23	\$ 10,119.26	\$ 19,054.11	\$ 15,068.01	\$ 15,408.90	\$ 47,165.75	\$28,012.21	\$113,803.88
											\$179,751.15

Italics indicate red figures.

EXHIBIT B, Schedule 3

COUNTY CONSTRUCTION FUNDS
STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	REVENUES				TOTAL FUNDS AVAILABLE	EXPENDITURES			CASH BALANCE, JUNE 30, 1958
	CASH BALANCE, JULY 1, 1957	FEDERAL AID APPORTIONMENT BY STATE	REMITTANCES BY COUNTIES	TRANSFERS FROM COUNTY MAINTENANCE FUNDS		TOTAL	CONSTRUCTION COSTS	FEDERAL AID REMITTED	
ALLEGANY COUNTY	\$ 77,369.41	\$ 141,074.03	\$ 71,084.41		\$ 134,786.36	\$ 118,490.62		\$ 118,490.62	\$ 16,289.74
ANNE ARUNDEL COUNTY		10,769.00	14,370.00		25,139.00	26,153.19		26,153.19	1,014.79
CAVERT COUNTY			8,000.00		8,000.00	5,739.62		5,739.62	2,260.38
CAROLINE COUNTY	3,751.28	49,249.00	49,249.00		53,000.28		\$ 49,249.00	49,249.00	3,751.28
CARROLL COUNTY		7,850.00	7,850.00		7,850.00		7,850.00	7,850.00	
Cecil County	416.89				416.86				416.86
CHARLES COUNTY	2,025.43	3,210.00		\$ 4,258.88	5,443.45	7,303.29		7,303.29	1,949.84
DORCHESTER COUNTY		81,056.00			81,056.00		81,056.00	81,056.00	
FREDERICK COUNTY	29.06	45,494.82	45,494.82		15,523.88		45,494.82	45,494.82	29.06
HOWARD COUNTY	19,193.66	74,740.01	51,270.90		126,910.91	82,201.32		118,649.32	26,564.25
KENT COUNTY		10,769.00	14,370.00		25,139.00	26,280.45		26,280.45	1,444.45
KEST COUNTY	4,999.03	14,224.38		52,138.95	66,363.33	29,628.79		29,628.79	41,733.57
PRINCE GEORGE'S COUNTY	29,297.97	25,600.00			5,392.03	13,992.82		13,992.82	8,690.79
QUEEN ANNE'S COUNTY	69,547.54	60,530.00	34,602.63	31,084.10	56,669.19	67,891.93		67,891.93	11,222.74
ST. MARY'S COUNTY	26,368.34		88,000.00		88,000.00	52,452.75		52,452.75	61,915.59
SOMERSET COUNTY		3,279.00			3,279.00		3,279.00	3,279.00	
WASHINGTON COUNTY	80,153.80	81,000.00			161,153.80	192,181.96		192,181.96	31,028.46
WICOMICO COUNTY		22,024.46			22,024.46			22,024.46	
WORCESTER COUNTY	3,236.26	18,600.00			18,600.00				
TOTAL	\$ 31,835.48	\$ 649,469.70	\$ 281,697.97	\$ 87,481.63	\$ 1,918,649.69	\$ 622,415.74	\$ 245,392.28	\$ 867,808.02	\$ 119,006.10

Italics indicate red figures.

SINKING FUNDS

STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1958

REPORT OF THE STATE ROADS COMMISSION OF MARYLAND

	STATE HIGHWAY CONSTRUCTION BONDS SINKING FUNDS				COUNTY HIGHWAY CONSTRUCTION BONDS SINKING FUNDS				
	TOTAL	SERIES A, C, D, AND E	SECOND ISSUE SERIES F, G, H, I, J, AND K	FIRST SERIES	SECOND SERIES	THIRD SERIES	FOURTH SERIES	TOTAL	
REVENUES:									
Portion of proceeds of 50% share of the Gasoline Tax Fund	\$9,038,220.06	\$1,798,964.48	\$4,239,255.58	\$ 108,292.50	\$ 123,305.00	\$ 48,331.90	\$ 131,189.31		
Portion of proceeds of 20% share of the Gasoline Tax Fund	11,088.71					91,430.60	95,170.00		
Portion of proceeds of 20% share of Motor Vehicle Revenue Fund	186,606.60	2,471,107.21	843,532.48						
Portion of proceeds of excise tax on certificates of title to motor vehicles	3,314,639.69		45,916.66						
Accrued interest on bonds sold—State Highway Construction Bonds, Series K, par value \$15,000,000	45,916.66								
Premium and accrued interest on bonds sold—County Highway Construction Bonds, Fourth Series, par value \$2,058,000	3,315.69	213,377.76	114,388.93	2,261.21	3,740.27	2,409.20	3,315.69		
Net income from United States Treasury obligations	337,990.90						1,813.53		
TOTAL REVENUES	\$13,337,772.31	\$7,483,449.45	\$5,243,083.65	\$ 110,523.71	\$ 127,045.27	\$ 142,171.70	\$ 231,488.53		
EXPENDITURES:									
Funds deposited with paying agent for debt service:									
State Highway Construction Bonds:									
Series A, due August 1, 1957	\$1,500,000.00	\$1,500,000.00							
Series C, due December 1, 1957	1,667,000.00	1,667,000.00							
Series D, due December 1, 1957	1,667,000.00	1,667,000.00							
Series E, due August 1, 1957	1,666,000.00	1,666,000.00							
Series F, due September 1, 1957	400,000.00		\$ 400,000.00						
Series G, due July 1, 1958	400,000.00		400,000.00						
Series H, due November 1, 1957	300,000.00		300,000.00						
Series I, due August 1, 1957	300,000.00		300,000.00						
Series J, due January 1, 1958	300,000.00		300,000.00						
Interest on all bonds	3,838,360.46	1,087,235.46	2,751,125.00						
County Highway Construction Bonds:									
First Series, due July 1, 1958	90,000.00			\$ 90,000.00					
Second Series, due August 1, 1957	20,000.00				\$ 20,000.00				
Third Series, due August 1, 1957	20,000.00								
Interest on all bonds	145,077.50			22,425.00	40,555.00	43,762.50	38,335.00		
TOTAL EXPENDITURES	\$12,313,437.96	\$7,587,235.46	\$4,451,125.00	\$ 112,425.00	\$ 60,555.00	\$ 63,762.50	\$ 38,335.00		
Excess of Revenues Over Expenditures (Excess of expenditures in italics)	\$1,024,334.35	\$ 896,213.99	\$ 791,968.65	\$ 1,101.29	\$ 66,490.27	\$ 78,409.20	\$ 193,153.53		
Cash Balance, July 1, 1957—Including investment in United States Treasury obligations	11,527,025.51	7,788,777.77	3,293,573.28	126,324.38	190,576.74	127,773.34	190,576.74		
Cash Balance, June 30, 1958—Including investment in United States Treasury obligations	\$12,551,359.86	\$7,684,991.76	\$4,085,541.93	\$ 124,423.09	\$ 257,067.01	\$ 206,182.54	\$ 193,153.53		

NOTE—The revenues and expenditures shown by this statement do not include the purchase, sale, or redemption of investment securities consisting of United States Treasury obligations. For purposes of this statement, United States Treasury obligations owned at July 1, 1957, and at June 30, 1958, are considered as the equivalent of cash.

EXHIBIT B, Schedule 5

GENERAL CONSTRUCTION AND OPERATING FUND, AND MAINTENANCE FUND
STATEMENT OF PARTICIPATION IN COSTS BY POLITICAL SUBDIVISIONS AND OTHERS FOR THE FISCAL YEAR ENDED JUNE 30, 1958

PROJECT NUMBER	RECEIVED FROM	DESCRIPTION	GENERAL CONSTRUCTION AND OPERATING FUND		MAINTENANCE FUND
			PROGRAM PRIOR TO JULY 1, 1951	THREE-YEAR PROGRAM	
AA 473-2	Anne Arundel Sanitary Commission.....	Installation of cast iron pipe and manhole at Glen Burnie By-pass, Furman Branch Road and U. S. 301.....		\$ 15,013.00	
AA 524X	County Commissioners of Anne Arundel County.....	Installation of 2 phase full-actuated traffic signal at the intersection of U. S. 301 and Fifth Avenue South in Glen Burnie.....		1,373.13	
B 635-11	Pataasco Tunnel Authority.....	Construction and relocation of Hollins Ferry Road.....		50,739.27	
B 635-30	Department of Public Works, Baltimore County.....	Installation of water line on steel beam bridge over the Baltimore County Beltway at the Dulaney Valley Road and also removal of water main in the detour road around the bridge.....			
B 637-2	Department of Public Works, Baltimore County.....	Final Costs of Right of Way for relocation of Rolling Road (Md. 166).....	\$ 20,500.00		
B 678	Baltimore County Office Central Services.....	Excavation for the Towson Sewer Interceptor and the necessary tank back fill located on Charles Street, adjacent to the large box culvert.....	4,898.48		
B 696-1	Department of Public Works, Baltimore County.....	Construction of multiple span steel bridge and approaches to carry Golden Ring Road over the B&O R.R. tracks southeast of U. S. 40.....	230,776.68	5,230.11	
B 716X	Baltimore County Police Department.....	Installation of 2 phase full-actuated traffic signals at the intersection of York Road and Seminary Avenue.....		1,270.67	
CE 359-2	Pennsylvania Railroad Company.....	Construction of highway bridge over Pennsylvania Railroad tracks, pedestrian subway crossing under the tracks in the town of North East, and approaches to the bridge.....		12,603.61	
M 434-1	County Commissioners of Montgomery County.....	Cost of acquiring Rights of Way for the completion of storm drainage construction.....	3,820.60		
M 435-3	County Commissioners of Montgomery County.....	Installation of storm sewer outfalls adjacent to Georgia Avenue, along Spring Street, Ballard Street and Woodside Parkway.....	151,076.39		
M 435-4	County Commissioners of Montgomery County.....	Construction of Georgia Avenue, including grading, drainage, etc.....	11,229.36		
M 435-5	County Commissioners of Montgomery County.....	Installation of storm sewer outfalls adjacent to Georgia Avenue along Hilda-rose Avenue and Windham Lane.....	13,077.99		
M 435-7	County Commissioners of Montgomery County.....	Installation of storm sewer outfalls adjacent to Georgia Avenue along Reddie Street and Parker Avenue.....	46,305.40		
M 556X	County Commissioners of Montgomery County.....	Installation of 2 phase full-actuated traffic signal at the intersection of Viers Mill Road (Md. 586) and Parkland Drive.....		3,405.66	
M 566X	County Commissioners of Montgomery County.....	Installation of 3 phase full-actuated traffic signal at the intersection of Viers Mill Road (Md. 586) and Randolph Road.....		3,034.55	

P 664X	County Commissioners of Prince George's County	Revision of traffic signal at the intersection of Queen Chapel Road (Md. 500) and Chillum Road (Md. 500).	1,000.00		
P 695-2	Washington Suburban Sanitary Commission	Cost for increasing size of storm drain on Baltimore Avenue north of bridge over N. W. branch at Peace Cross, intersection of U. S. 1 and U. S. 30	4,221.00		
P 721-2	University of Maryland	Construction of access road to Byrd Stadium, connecting University Lane relocation	23,545.89		
P 731-2	County Commissioners of Prince George's County	Construction of concrete sidewalks on new section of University Lane	2,586.44		
P 771-2	Contee Sand and Gravel Corp.	Construction of additional crossovers and left turn storage lanes on Queens-hurc Road, to be completed during construction of East-West Highway (Md. 410)	6,393.17		
P771X4	County Commissioners of Prince George's County	Installation of 2 phase full-actuated traffic signal at the intersection of East-West Highway (Md. 410) and 25th Avenue	3,162.53		
P 785X	County Commissioners of Prince George's County	Installation of full-actuated traffic signal at the intersection of Marlboro Pike (Md. 4) and 37th Avenue	2,275.23		
P 793X	County Commissioners of Prince George's County	Installation of a semi-actuated traffic signal at the intersection of Marlboro Pike (Md. 4) and Forestville Road	1,520.16		
P 794X	County Commissioners of Prince George's County	Installation of 2 phase full-actuated traffic signal at the intersection of Indian Hill Road (Md. 216) and Open Hill Road (Md. 414)	1,143.74		
P 803X	County Commissioners of Prince George's County	Installation of full-actuated traffic signal with pedestrian controls at the inter-section of Kenilworth Avenue (Md. 291) and Decatur Street in Edmondston	3,380.91		
SM 354X	County Commissioners of St. Mary's County	Installation of 2 phase full-actuated traffic signal at the intersection of Great Mills Road (Md. 246) and Shaught La Drive, Lexington Park	2,538.86		
S 177-6	Pennsylvania Railroad Company	Construction of bridge carrying the Pocomoke By-pass over the Pennsylvania Railroad and approaches to bridge	109,759.26		
W 428-4	City of Hagerstown	Construction of four single span steel girder railroad bridges, underpass and relocation of Pennsylvania and Western Maryland Railway tracks, each bridge to carry two tracks	279,827.55		\$ 1,986.07
W 428-5	City of Hagerstown	Use of railroad siding near Salisbury plant			157.87
—	Campbell Soup Company	Work performed on Ager Road			86.74
—	County Commissioners of Prince George's County	Erection and removal of certain directional signs			82.86
—	Bowie Race Track Authority	Erection and removal of certain directional signs			92.24
—	Laurel Race Track Authority	Erection and removal of certain directional signs			
—	Pinkie Race Track Authority	Erection and removal of certain directional signs			
—	Marlow Heights Land Corporation	Engineering and right-of-way services for cost of lowering 2 wells (Revenue transferred from Maintenance Fund to the General Construction and Operating Fund Program Prior to July 1, 1954, in the fiscal year 1958)	2,000.00		2,000.00
—	La Vale Sanitary Commission	Construction of water line to serve the new district office in Cumberland, Maryland			1,000.00
TOTAL			\$ 539,569.35		\$ 1,405.78

Italics indicate red figures.

EXHIBIT C

COMBINED STATEMENT OF EXPENDITURES, BY FUNDS AND BY DIVISIONS, FOR THE FISCAL YEAR ENDED JUNE 30, 1958
(INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED
OCTOBER 1, 1954, RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	ADMINISTRATIVE AND GENERAL EXPENSES (Schedule 1)				EQUIPMENT SERVICE COSTS (Schedule 2)	GENERAL CONSTRUCTION AND OPERATING FUND				COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND	COUNTY MAINTENANCE FUNDS	COUNTY CONSTRUCTION FUNDS	SINKING FUNDS
	TOTAL	OTHER THAN REPAIRS	REPAIRS	GENERAL		GENERAL CONSTRUCTION	MAINTENANCE FUND	GENERAL	CONSTRUCTION				
GENERAL DIVISIONS:													
Maintenance	\$ 84,349.56	\$ 77,793.61	\$ 66.50	\$ 1,921.28	\$ 51,904.55	\$ 6,215.20	\$ 274.22	\$ 283.48					
Special Operations	898,615.15	104,800.13	1,659.61			703,330.10	35,842.01						
Commission—Administration	221,811.39	212,519.22	1,021.07			7,201.19	783.13						
Commission—Public Relations	58,677.98	35,619.60	102.42	21,573.24		1,382.72							
Keep Maryland Beautiful	8,941.13	8,936.88	7.25										
Accounting	425,588.02	124,163.91	1,121.71										
Engineering—Chief	180,681.04	180,227.36	200.00										
Road Design	657,144.00	357,108.94	1,450.80										
Bridge Design	648,177.20	211,544.50	708.53	32.80									
Sign Shop (Baltimore)	71,882.67	52,977.02	345.48	17,892.23									
Soils and Materials	591,960.90	280,281.84	10,315.40	1,912.85									
Legal	107,262.09	107,122.54	139.55										
Repair Shop (Baltimore)	61,034.34	51,715.23	6,559.23	39.61									
Construction Inspection	1,948,237.17	180,700.89	1,181.13	468.91									
Right-of-Way	132,121.75	132,050.75	71.00										
Personnel	99,898.83	87,232.91	12,665.92										
Main Office Building Service	1,004,228.24	297,317.16	1,361.00	1.44									
Highway Location and Survey	45,013.52												
Williamsport Toll Bridge	30,165.36												
Engineering—Hauling Permits	399,005.75	354,456.23	6,222.67	30,165.36									
Traffic—General	29,232.48	25,242.69	188.52	989.06									
Traffic—Control Surveys and Maps	304,265.86			304,265.86									
Engineering—Special Services	131,384.70	120,895.68	109.53										
Engineering—General Office	140,915.59	131,261.82	429.83										
Engineering—Development	48,848.88	48,640.08	208.50										
Total	\$9,254,929.33	\$4,328,331.67	\$ 46,191.65	\$ 339,684.72	\$ 51,904.55	\$ 4,275,701.90	\$ 157,549.71	\$ 13,081.69	\$ 19,194.44				

DISTRICT DIVISIONS:												
District No. 1	\$ 970,801.78	\$ 203,276.58	\$ 951.64	\$ 82,592.12	\$ 2,622.79	\$ 14,696.81	\$ 663,368.55	\$ 3,289.99				
District No. 2	2,685,510.82	332,683.91	12,018.10	328,664.95	7,991.99	26,401.29	944,577.57	947,095.22	\$ 66,983.76			
District No. 3	1,666,269.36	341,234.05	5,739.81	143,098.15	10,742.65	115,375.09	1,050,279.61					
District No. 4	1,553,910.20	296,003.89	2,658.14	131,969.94	381.04	75,373.27	1,043,323.02					
District No. 5	2,335,029.02	440,836.25	9,195.84	255,807.54	10,590.55	54,397.79	1,139,680.37	630,811.60				
District No. 6	1,084,396.75	268,013.76	1,249.49	133,049.07	2,891.97	32,367.31	642,233.54					
District No. 7	1,187,601.14	273,749.99	8,474.67	143,655.98	2,038.46	39,076.87	720,605.17					
TOTAL	\$11,713,462.07	\$2,176,998.46	\$ 43,030.69	\$1,221,838.05	\$ 36,269.45	\$ 358,388.43	\$6,294,068.73	\$1,581,196.81	\$ 121,571.45			
TOTAL GENERAL AND DISTRICT DIVISIONS												
NON-DEPARTMENTAL	\$20,978,382.40	\$6,505,330.13	\$ 89,522.34	\$1,276,742.60	\$ 375,934.17	\$4,634,190.33	\$6,361,618.44	\$1,594,278.50	\$ 140,765.89			
	83,403,400.13				<i>25,437.24</i>	57,067,319.76	1,023,363.70	55,688.97	1,625,425.13			\$12,313,437.96
Total (before Fund Distribution of administrative and general expenses, and equipment service costs)												
APPLICATION OF:	\$104,381,782.83	\$6,505,330.13	\$ 89,522.34	\$1,276,742.60	\$ 350,496.93	\$61,701,510.09	\$7,384,082.14	\$1,649,367.47	\$11,706,191.02			
Administrative and General Expenses		<i>6,507,132.04</i>	<i>99,425.04</i>	<i>1,276,742.69</i>	6,580.96	5,101,129.21	1,282,391.22	162,332.31	45,113.38			
Equipment Service Costs		1,801.91	902.70		7,681.25	69,231.67	959,383.24	228,012.21	9,729.62			
TOTAL EXPENDITURES	\$104,381,782.83				\$ 364,769.14	\$66,871,870.97	\$9,626,756.60	\$2,040,311.99	\$1,821,034.02			

NOTE—This statement does not include:
 Cost of United States Treasury obligations purchased. \$43,054,891.83
 Remittances of collections to State Treasurer.
 Sign licenses—General Fund 8,141.70
 Hauling permits—General Fund 224,050.00

Italics indicate red figures.

EXHIBIT C, Schedule 1

STATEMENT OF ADMINISTRATIVE AND GENERAL EXPENSES
FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	TOTAL	SALARIES AND WAGES	PAY FOR VACATION, SICK, AND OTHER LEAVE	PENSION CONTRIBUTIONS AND SOCIAL SECURITY CONTRIBUTIONS	TELEPHONE, TELEGRAPH, AND POSTAGE	TRAVELING EXPENSES	RENTAL OF LAND, BUILDINGS, AND EQUIPMENT	SUPPLIES—OFFICE, LABORATORY, ETC.	PRINTING, PHOTODUPLICATION, ETC.	LIGHT, HEAT, POWER, AND WATER	MISCELLANEOUS	REPAIRS	
												SALARIES AND WAGES	MATERIALS, CONTRACTUAL SERVICES, ETC.
GENERAL DIVISIONS:													
Maintenance	\$ 77,800.14	\$ 47,683.30	\$ 12,266.92	\$ 6,616.36	\$ 1,951.69	\$ 1,750.92	\$ 2,647.63	\$ 3,905.08	\$ 39.72	\$ 655.28	\$ 491.93	\$	\$ 66.50
Special Operations	106,159.71	50,110.15	17,221.96	15,037.20	4,583.80	2,060.23	1,101.10	12,441.80	74.35		1,511.29		1,057.84
Commission—Administration	213,543.29	99,907.06	10,116.47	13,013.17	9,946.15	3,653.91	8,975.85	5,623.90	31,721.84		26,115.78		1,021.07
Commission—Public Relations	35,722.02	11,335.26	1,962.61	1,652.63	1,837.46	1,888.49	463.00	2,716.75	4,104.23		9,329.17		102.12
Keep Maryland Beautiful	8,914.13	8,914.13			639.76			2,968.17	5,107.72		231.24		1,321.71
Accounting	425,588.62	293,741.42	44,763.51	39,533.54	8,107.15	901.72	10,776.60	17,513.52	61.00	4,374.28	1,001.17		1,321.71
Engineering—Chief	180,187.36	117,200.26	15,329.76	15,681.12	10,723.87	3,925.69	1,158.25	1,158.25	112.68		11,281.70		200.00
Road Design	358,559.74	145,361.96	62,817.62	52,125.66	2,655.21	2,154.42	52,691.38	21,719.51	575.15	4,271.31	9,424.49		1,350.80
Bridge Design	242,253.63	96,963.64	52,071.53	49,823.79	3,110.26	3,693.21	16,751.13	10,035.86	255.22	296.27	8,598.29		798.33
Sign Shop (Baltimore)	53,322.60	21,339.30	13,088.27	8,080.14	1,025.10	991.30		2,187.91		2,332.54	932.46		343.18
Soils and Materials	990,507.24	115,982.79	52,168.52	41,296.63	4,151.49	3,182.35	42.85	42,493.65	62.96	6,008.50	11,912.10		10,313.40
Legal	197,292.09	74,843.57	1,352.12	7,519.30	1,265.02	3,291.29	1,277.50	1,985.19	97.50		10,191.05		131.55
Repair Shop (Baltimore)	61,295.46	29,922.27	9,219.47	806.03				1,854.89		2,741.10			
Construction Inspection	180,790.89	53,907.01	236,898.77	6,465.17	870.17	2,600.47	2,600.47	10,216.49	4.70	140.63	2,039.16		
Right-of-Way	513,813.78	233,702.89	86,392.64	77,788.88	18,750.90	6,708.17	7,226.80	52,613.86	3,053.18	771.46	25,583.87		963.15
Personnel	132,121.75	32,751.78	3,901.86	4,453.07	1,303.90	95.45	2,548.72	1,433.33		116.13	85,350.51		71.00
Main Office Building	99,898.83	53,522.76	4,331.87	5,647.43	162.01		596.70	6,155.70		15,233.29	1,610.12		12,065.92
Service													
Highway Location and Survey	298,681.16	86,838.42	90,138.67	75,641.35	2,772.18	1,906.33	2,219.65	30,851.31	743.92		6,205.43		1,361.00
Traffic—General	360,678.90	228,127.07	35,322.98	29,881.63	2,453.66	13,673.80	12,103.50	13,066.09	15,654.80	189.83	3,952.87		6,222.67
Traffic—Control Surveys and Maps	25,131.21	15,841.05	2,546.91	2,296.23	324.08	2,991.31	6.30	863.49	17.60		352.72		188.52
Engineering—Special Services	121,005.21	85,501.01	13,611.50	10,430.03	1,533.82	1,341.84	1,361.30	3,873.91	8.44		3,223.83		101.53
Engineering—General Office	131,657.65	87,013.49	13,637.97	12,290.15	1,329.88	1,130.61	862.10	7,397.63	5,422.14		2,270.85		422.83
Engineering—Development	48,848.58	31,307.85	4,126.91	3,737.24	724.41	1,311.10	1,861.90	2,237.29	3.20		330.15		208.50
TOTAL	\$4,374,823.92	\$2,018,907.40	\$ 783,678.81	\$ 654,821.28	\$ 81,355.06	\$ 59,533.72	\$ 128,200.13	\$ 266,423.77	\$ 70,465.35	\$ 37,072.62	\$ 227,424.53	\$ 2,207.70	\$ 44,283.95

District Divisions:	\$ 204,221.22	\$ 56,261.60	\$ 45,499.51	\$ 4,798.77	\$ 1,997.08	\$ 940.50	\$ 7,410.72	\$ 114.66	\$ 912.56	\$ 917.68	\$ 123.80	\$ 830.84
District No. 1	364,702.04	100,822.20	91,217.18	8,465.56	1,597.75	2,607.10	12,231.88	65.55	333.70	3,280.58	8,070.62	3,638.18
District No. 2	346,713.86	122,032.26	87,408.71	10,856.49	1,742.31	96.33	10,571.06	16.07	752.65	1,980.31	2,732.62	2,555.19
District No. 3	296,282.65	87,371.26	80,489.01	6,811.73	2,188.85	3,484.03	8,337.75	13.27	515.08	1,100.27	1,232.46	3,426.74
District No. 4	190,032.69	106,458.82	123,557.77	8,515.26	3,029.82	1,207.70	11,211.22	22.25	71.65	1,418.33	6,206.15	2,339.66
District No. 5	272,833.25	82,103.32	73,237.01	9,631.83	753.11	553.25	10,576.26	181.79	450.12	1,012.41	2,375.51	1,273.65
District No. 6	282,224.06	81,891.10	76,266.83	6,353.72	531.40	324.85	7,284.62	68.90	126.82	902.22	6,492.30	1,981.77
Total	\$2,220,029.15	\$ 691,082.25	\$ 745,144.22	\$ 55,159.42	\$ 12,290.32	\$ 9,414.66	\$ 70,656.55	\$ 385.46	\$ 3,927.77	\$ 10,861.86	\$ 27,925.03	\$ 15,105.66
TOTAL	\$9,591,852.47	\$2,710,589.65	\$1,528,823.03	\$ 136,814.48	\$ 71,833.04	\$ 137,623.79	\$ 337,080.32	\$ 70,790.81	\$ 40,600.39	\$ 238,786.36	\$ 30,132.73	\$ 59,389.61

NOTES:
Amounts in excess of \$10,000.00 included in this statement under "Miscellaneous" are analyzed as follows:

GENERAL DIVISIONS	TOTAL	WORKMEN'S COMPENSATION INSURANCE AND MEDICAL SERVICES	OTHER INSURANCE	PROFESSIONAL AND TECHNICAL SERVICES	OFFICE MEAL ALLOWANCE	REPAIR SERVICES	OTHER
COMMISSIONS-ADMINISTRATION	\$ 26,415.78		\$ 278.98	\$ 11,791.26	\$ 6.75	\$ 930.11	\$ 13,408.68
ENGINEERING-CHIEF	11,251.70		171.38	8,308.57	277.19	537.54	1,957.02
SOILS AND MATERIALS	11,902.10		675.36	1,104.12	4,314.30	4,604.70	1,203.62
LEGAL	10,491.05		184.48	8,906.55	486.00	488.95	422.07
RIGHT-OF-WAY	25,589.87		2,147.94	15,881.22	829.60	5,052.34	1,675.77
PERSONNEL	85,350.51	\$ 84,419.31	2,172	531.63		31.10	343.75

Passenger car costs for the fiscal year ended June 30, 1958, amounting to \$261,678.63, are included in this statement under the appropriate classification and are shown, by Divisions, in the accompanying Schedule (a of Exhibit C.

EXHIBIT C, Schedule 1a

**STATEMENT OF PASSENGER CAR COSTS (INCLUDED IN ADMINISTRATIVE AND
GENERAL EXPENSES) FOR THE FISCAL YEAR ENDED JUNE 30, 1958**

GENERAL DIVISIONS:			
Maintenance		\$	3,263.17
Special Operations			12,793.71
Commission—Administration			6,210.16
Commission—Public Relations			2,114.71
Accounting			786.45
Engineering—Chief			4,520.24
Road Design			3,649.34
Bridge Design			6,927.86
Sign Shop (Baltimore)			2,385.02
Soils and Materials			24,551.59
Legal			4,760.76
Repair Shop (Baltimore)			3,979.37
Construction Inspection			12,432.17
Right-of-Way			44,911.16
Personnel			433.64
Main Office Building Service			609.25
Highway Location and Survey			27,747.45
Traffic—General			12,722.86
Traffic—Control Surveys and Maps			1,358.18
Engineering—Special Services			3,888.85
Engineering—General Office			2,617.32
Engineering—Development			3,331.73
	TOTAL		\$ 185,994.99
DISTRICT DIVISIONS:			
District No. 1		\$	8,391.96
District No. 2			14,035.17
District No. 3			11,694.15
District No. 4			9,602.97
District No. 5			14,251.76
District No. 6			12,038.75
District No. 7			8,668.88
	TOTAL		\$ 78,683.64
TOTAL			\$ 264,678.63

STATEMENT OF OPERATING EQUIPMENT EXPENSES
FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	TOTAL	DISTRICT							STATE WIDE
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	
Salaries and Wages	\$ 446,383.22	\$30,147.23	\$95,106.87	\$51,805.55	\$57,446.96	\$83,748.37	\$49,090.22	\$63,815.55	\$15,222.47
Insurance	18,432.23	1,442.78	3,870.53	2,238.64	1,922.11	3,187.10	2,244.65	2,112.64	1,423.78
Light, Heat, Power, and Water	36,614.11	4,727.42	9,058.03	3,470.57	4,445.29	6,077.70	3,702.13	4,690.27	442.70
Traveling Expenses	862.56	80.05	228.51	27.80	215.15	216.55	17.95	68.80	63.35
Fuel Oil—Diesel	18,159.95	274.28	8,120.69	1,490.18	704.43	3,439.01	715.53	1,095.92	2,319.91
Gasoline	243,972.03	15,055.81	59,184.87	26,803.32	25,837.25	52,755.26	33,423.94	24,421.21	6,490.37
Kerosene	9,576.54	848.46	3,048.19	729.83	1,355.05	1,788.49	970.14	750.37	86.01
Lubricating Oil	12,519.36	739.54	3,654.57	1,276.37	951.60	2,874.84	1,293.63	1,087.14	641.67
Parts and Repairs	343,464.20	20,852.67	106,421.86	37,553.69	28,379.35	69,249.69	27,438.63	30,476.26	23,092.05
Shop Materials and Supplies	56,450.62	4,621.72	16,325.66	6,571.85	5,232.65	9,923.88	5,635.44	6,433.85	1,705.57
Tires and Tubes	80,508.73	3,253.75	21,114.57	10,634.50	7,023.10	20,989.76	6,812.59	7,810.57	2,869.89
Miscellaneous Expenses	9,799.05	548.71	2,530.60	561.45	1,457.00	1,556.89	1,704.22	893.40	546.78
TOTAL	\$1,276,742.60	\$82,592.42	\$328,664.95	\$143,098.15	\$134,969.94	\$255,807.54	\$133,049.07	\$143,655.98	\$54,904.55

Italics indicate red figures.

EXHIBIT D

COMBINED STATEMENT OF EXPENDITURES, BY OBJECTIVE CLASSIFICATION, FOR THE FISCAL YEAR ENDED JUNE 30, 1958
(INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	GENERAL CONSTRUCTION AND OPERATING FUND										COUNTY MAINTENANCE FUNDS	COUNTY CONSTRUCTION FUNDS	SINKING FUNDS	
	ADMINISTRATIVE AND GENERAL EXPENSES		EQUIPMENT SERVICE COSTS		GENERAL CONSTRUCTION		MAINTENANCE FUND	COUNTIES AND MUNICIPALITIES TAX REVENUE ALLOCATION FUND	GENERAL CONSTRUCTION	COUNTY MAINTENANCE FUNDS				
	OTHER THAN REPAIRS	REPAIRS	GENERAL	EQUIPMENT SERVICE COSTS	GENERAL CONSTRUCTION	MAINTENANCE FUND								
TOTAL														
SALARIES, WAGES, AND EMPLOYERS' BENEFITS:														
Staff salaries	\$5,748,116.01	\$2,399,955.56		\$ 26,000.11	\$ 175,231.30	\$3,021,640.39		\$ 91,155.62		\$ 12,192.43	\$ 15,630.57			
General salaries	2,631,651.77	121,983.83		328,618.35	12,261.73	82,314.83		1,610,416.29		392,976.33	39,913.40			
Hourly wage	3,003,558.11	188,659.26		13,769.72	600,307.36	117,501.88		2,089,771.01		373,163.30	28,631.85			
Sick leave	451,882.69	111,281.61			7,878.83			697.22		21,025.00				
Vacation leave	593,661.69	511,631.93			11,501.87			2,709.40		31,518.19				
Military leave	18,215.83	17,675.01			315.56					225.26				
Holiday, jury, and other leave	599,583.48	551,331.45			11,001.89			2,366.67		312,833.17				
Medical services	1,975.00													
Workmen's compensation insurance	93,143.19	79,111.31								13,908.88				
Pension contributions	1,086,905.75	997,103.65			19,092.37			3,028.17		67,381.56				
Social security contributions	259,600.81	231,981.58			5,577.51			680.33		18,367.36				
MATERIALS AND SUPPLIES:														
Additive with bituminous material	773.01							710.67						
Aggregates, graded stone, slag, gravel, sand, and screenings	617,108.81		.50		1,463.75	70,918.79		341,330.08		183,538.91		19,829.78		
Aggregates, ungraded, bank run gravel and sand, oyster shells, and crusher run stone														
Bituminous materials	148,811.73		150.17		359.95	60,588.53		62,496.25		17,540.23		2,379.60		
Brick	212,061.58				5,109.97	16,736.75		143,735.11		50,988.75				
Cable	1,105.49		12.28			606.42		471.79		12.00				
Calcium chloride (salt)	258,613.11	8.23			552.83	331.93		2,709.83		2,781.71				
Concrete	5,639.16				26.88	2,728.72		253,468.61		2,328.25				
Coalers	47,638.62		110.69		7.32	1,328.86		3,121.19		773.61		70.19		
Coal	37,568.07		28.50			25.20		17,130.92		151.00				
Diesel or fuel oil	323,185.55	1,068.38			169.06	7,510.09		27,527.57		1,731.69				
Gasoline	369,203.85	102,829.45			30.67	1,331.62		3,469.10		1,701.33				
Grader blades and chains	30,301.61	9,420.06			3.34	1,611.22		7,999.77		17,833.67				
Head for buildings	33,017.45				170.91	117.82		1,767.64		2,026.37				
Highway beautification	80,806.27	11,613.33			329.00	39,896.77		41,106.78		12.72				
Kerosene	16,100.60		12.33		4.45	551.65		5,349.45		574.35				
Laboratory supplies	21,619.92	21,617.28						2.61						
Lubricating oil	18,735.50	5,299.52				2,499		16,171.88		812.78				
Lumber	49,018.35	42.80			7,595.81	9,192.18		2.77		10,119.26				
Office building service supplies	7,918.93	7,909.80												
Office supplies	127,101.59	123,110.05			3,041.63	75.48		1,938.38		16.50				
Paint	130,761.31	101,01.07			2,628.43	2,010.91		120,329.57		373.29				
Parts for motor vehicle repairs	265,584.78	29,918.66			3,603.86	2,010.91		10,745.76		8,230.96				
Parts for other repairs	57,547.62	.38			138.88	172.73		2,256.22		2,638.69				

Pipe and pipe bands	117,610.50	111.32	3,977.77	5,131.97	38,563.13	23,041.66	49,054.11	3,039.08
Pests and guard rails	42,059.79	43.30	5.33	317.93	2,406.19	39,173.26	107.10	6.68
Pre-mixed bituminous materials	446,566.70			4,025.06	147,464.22	274,164.98	28,962.56	
Stencils for signs	70,452.88			70,443.84	9.04		606.62	
Shop supplies	58,727.53	3,874.50	49,582.74	467.68	84.77	1,007.54	3,333.76	171.53
Small tools other than shop tools	40,278.87	9,426.05		249.27	5,313.10	21,532.03		
Steel and iron	16,120.52	230.13		11.26	16,025.46	83.80	957.59	
Steel and iron blades and parts	69,771.46	293.48	2,536.98	23,213.52	23,981.20	10,482.71	6,317.07	
Tires and tubes	105,172.90	17,298.87	80,598.73	144.90	590.96	2,200.86	67.11	14.00
Wire	3,311.90	206.78	8,652.03	7,623.29	88,160.12	82,686.89	1,020.20	13.37
Miscellaneous	194,950.89	4,963.88			10,584.87	93,183		283.48
GENERAL OPERATING EXPENSES:								
Advertising	12,207.22	494.14		91.75	79.60	79.60		
Books and subscriptions	1,874.96	4,703.61		759.33	17,821.28	97,624.17	113,803.88	27,233.49
Contractual costs—oilng, etc.	257,233.15					36.40		
Dues	32,193.55	2,355.15		68.26	2,869.80	30.40		
Insurance	32,193.50	1,653.03	18,132.22	818.25	136.88			
Laundry service	5,269.84	3,207.84	1,049.75	818.25	1,970.24	68,531.70		
Light, power, and water	119,298.44	28,467.06	15,461.64	937.71	3,120.75	2.25		
Office cleaning service	4,881.81	1,749.81			468.00	14.50		
Office meal allowance	18,067.75	17,237.13			12,463.07	83.14		
Passenger car costs	13,804.21	15,359.51			2,773.37	28.75		
Printing	21,590.71	55,449.30		6,296.91	40.75	17.35		
Professional and technical services	62,225.31	72,087.47		915.28	27,381.46	17,267.15	42.67	740.32
Rental of automatic equipment for hauling materials	118,634.35				145,363.91	38,321.69	45,498.90	
Rental of automatic equipment for direct road work	229,094.50					465,120.27	47,165.75	
Rental of land and buildings	699,470.35	106,519.86		918.07	96,296.26	5.09	383.00	
Rental of office equipment	108,727.19	31,111.63		307.70				
Repair services (purchased) other than passenger cars	187,387.58	33,693.25	74,427.46	4,127.30	9,048.60	25,674.31	4,179.51	
Signs and markers (includes manufacturing cost of signs and markers withdrawn from stock)	138,028.03	599.29		1,436.73	29,450.50	106,025.87	515.64	
Special operations	256,128.30	63.09	30.10	742.40	142,901.30	191,756.25	10,534.40	
Telephone, telegraph, and postage	152,186.62	136,814.48		2,638.10	8,998.58	3,611.83		123.63
Traveling expenses	508,726.11	71,833.04	892.56	16,873.87	389,091.12	28,834.92	1,744.92	2,573.68
Miscellaneous	25,295.15	6,965.28	60.81	10,227.29	2,565.74	5,773.09		12.94
OTHER EXPENDITURES:								
Construction contract payments	42,515,581.78			10,739.06	41,931,792.59	191,577.72		413,475.41
Land purchased (right-of-way)	10,817,291.15				10,846,291.15			1,000.00
Professional services	3,405,213.74				3,391,439.98	2,927.00		10,846.76
Relocating power lines, etc., upon acquisition of right-of-way	306,940.97				305,158.89	295.00		1,487.08
Purchases of fixed assets (exclusive of overhead and equipment service costs)	768,260.56			2,092.34		766,168.22		

Payment to Baltimore and Ohio Railroad—Bridge over Everts Creek.....	42,750.00				42,750.00				
Establish geodetic control along interstate highway system.....	151,350.36				151,350.36				
Repairs and alterations to buildings.....	55,496.70			2,129.00	5,702.25				
Revision of traffic signal.....	73,653.09			2,887.60	70,765.49		47,625.45		
Board of Property Review—general expenses.....	61,718.02				61,718.02				
Miscellaneous.....	63,112.33			924.45	47,417.57		11,770.31		
TOTAL (before Fund distribution of administrative and general expenses, and equipment service costs.....)	\$104,381,782.83	\$ 89,522.34	\$ 1,276,742.60	\$ 350,496.93	\$61,701,510.09	\$7,384,982.14	\$11,343,002.15	\$1,649,967.47	\$12,313,437.96
APPLICATION OF:									
Administrative and general expenses.....	6,507,132.04	90,425.04		6,590.96	5,101,126.21	1,282,391.22		162,332.31	45,113.38
Equipment service costs.....	1,801.91	902.70	1,276,742.60	7,681.25	69,231.67	950,383.21		228,012.21	9,729.62
TOTAL EXPENDITURES.....	\$104,381,782.83			\$ 364,769.14	\$66,871,870.97	\$9,626,756.60	\$11,343,002.15	\$2,040,311.99	\$12,313,437.96

NOTE—This statement does not include:
 Cost of United States Treasury obligations purchased..... \$43,054,801.83
 Reimbursements of collections to State Treasurer..... \$111.70
 Sign licenses—General Fund.....
 Hauling permits—Motor Vehicle Revenue Fund..... 224,050.00

Italics indicate red figures.

EXHIBIT E

COMBINED BALANCE SHEET, JUNE 30, 1957 (INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954, RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	TOTAL	CONSTRUCTION PROGRAM PRIOR TO JULY 1, 1954, AND GENERAL OPERATING FUND	TWELVE-YEAR PROGRAM AND FEDERAL INTERSTATE PROGRAM CONSTRUCTION FUND	MAINTENANCE FUND	COUNTY AND MUNICIPALITY FUNDS (Schedule 1)	BONDED DEBT AND DEBT SERVICE FUNDS (Schedule 2)	FIXED ASSETS (Schedule 3)
ASSETS							
CASH AND INVESTMENTS:							
Cash With State Treasurer							
Investment in United States Treasury obligations—Maturity value \$23,443,000—at cost	\$ 9,916,731.62	\$ 1,481,020.15	\$ 114,696.04	\$ 3,175,306.93	\$ 1,287,113.53	\$ 227,997.97	
Working Fund	23,200,381.51	500,000.00	11,901,351.00			11,299,027.54	
	500,000.00						
Debt Service Funds With Paying Agent for Payment of: coupons payable July 1, 1957, \$576,587	599,622.81					599,622.81	
Bonds payable July 1, 1957, \$576,587	180,000.00					180,000.00	
Accounts Receivable	1,261,243.90	1,261,038.05		205.85			
Federal Aid:							
Under agreements	33,108,582.80	1,900,904.90	30,635,804.00		57,1784.00		
Agreements in process	10,335,976.00	1,216,195.00	6,119,781.00				
Available for Agreements (Includes 1958 Apportionment)	15,088,547.50	15,088,547.50					
Inventories of Materials and Supplies—At cost	2,175,475.33	2,175,475.33					
Preliminary Construction Costs, ETC. (Authorizations pending)	15,109.13	3,831.96	11,277.17				
Roads System Construction and Other Work in Progress	155,375,669.13	20,992,385.91	134,383,283.22				
Roads System and Other Fixed Assets (Book value)	467,654,871.06						\$ 467,654,871.06
Future Tax Revenue Encumbered and Portion of Existing Sinking Funds Reserved for the Redemption of: State Highway Construction Bonds	156,775,000.00					156,775,000.00	
County Highway Construction Bonds	4,298,000.00					4,298,000.00	
Future Revenues Encumbered for the Completion of Authorized Projects	57,227,270.55		56,609,476.17		617,794.38		
TOTAL	\$937,985,484.50	\$50,023,001.80	\$240,105,758.60	\$3,175,512.78	\$2,476,994.91	\$173,649,648.35	\$ 467,654,871.06

LIABILITIES					
TAX APPROPRIATIONS PAYABLE TO:					
Counties	\$612,978.68			\$ 612,978.68	
Municipalities	400,763.32			400,763.32	
Matured Bonds and Interest Coupons Payable	599,622.81			\$ 599,622.81	
BONDS PAYABLE:					
STATE HIGHWAY CONSTRUCTION BONDS:					
Series A, C, D, and E	63,675,000.00				63,675,000.00
Second Issue—Series F, G, H, I, and J	33,500,000.00				33,500,000.00
COUNTY HIGHWAY CONSTRUCTION BONDS—First, Second, and Third Series	4,348,000.00				4,348,000.00
DUE STATE COMPTROLLER FOR WORKING FUND ADVANCED	500,000.00	\$ 500,000.00			
OTHER LIABILITIES, INCLUDING DEFERRED CREDITS	900,000.00				
STATE EQUITY IN ROADS SYSTEM CONSTRUCTION AND OTHER WORK IN PROGRESS	11,187.32	6,309.72	\$ 1,878.20		
STATE EQUITY IN ROADS AND OTHER FIXED ASSETS:	155,390,778.26	20,996,220.87	\$134,394,557.39		
SYSTEM FACILITIES:					
Construction Program Prior to July 1, 1951	433,991,311.27				\$433,991,311.27
Twelve-Year Program and Federal Interstate Program Construction Fund	23,372,692.77				23,372,692.77
SERVICE FACILITIES	10,290,837.02				10,290,837.02
RESERVES:					
Completion of authorized projects	71,732,346.95	2,018,243.52	68,955,536.21	143,938.15	584,639.07
Acquisition of capital properties	3,316,012.82			3,316,012.82	
Federal aid unrealized	58,533,106.40	21,205,647.40	36,755,675.00		571,784.00
Accounts receivable	1,123,347.44	1,123,347.44			
Sign Permit Fund (Roadside Projects \$228,18, Unencumbered \$10,249.58)	10,477.76			10,477.76	
Other	6,467.06			205.85	
SINKING FUNDS:					
STATE HIGHWAY CONSTRUCTION BONDS:					
Series A, C, D, and E	7,788,777.77				7,788,777.77
Second Issue—Series F, G, H, I, and J	3,293,573.28				3,293,573.28
COUNTY HIGHWAY CONSTRUCTION BONDS—First, Second, and Third Series	444,674.46				444,674.46
Current working funds and new projects	5,043,498.28	4,736,974.64		306,526.64	
TOTAL	\$937,985,484.50	\$50,623,001.80	\$240,105,758.60	\$3,475,512.78	\$173,649,648.35

Note.—The State Roads Commission of Maryland is authorized under Sections 199 to 210, inclusive, of Article 89B of the Annotated Code of Maryland (1957 Edition) to issue from time to time until June 30, 1965, within certain limitations, a total of \$320,000,000 State Highway Construction Bonds, Second Issue, the proceeds to be used to supplement construction funds available for the twelve-year road program. At June 30, 1957, bonds of a total face amount of \$35,000,000 had been issued under this authority.

EXHIBIT E, Schedule 1

COUNTY AND MUNICIPALITY FUNDS
COMBINED BALANCE SHEET, JUNE 30, 1957

COUNTY	ASSETS				LIABILITIES				TOTAL				
	CASH WITH STATE TREASURER	FEDERAL AID APPROPRIATIONS	FUTURE REVENUES ENCUMBERED FOR THE COMPLETION OF AUTHORIZED PROJECTS	TOTAL	TAX APPOINTMENTS PAYABLE			RESERVES					
					COUNTIES	MUNICIPALITIES	COMPLETION OF AUTHORIZED PROJECTS	FEDERAL AID UNREALIZED		NEW PROJECTS			
COUNTY MAINTENANCE FUNDS:													
Calvert	\$ 16,764.27			\$ 16,764.27								\$ 16,764.27	\$ 16,764.27
Cecil	89,059.85			89,059.85								89,059.85	89,059.85
Charles	25,710.77			25,710.77								25,710.77	25,710.77
Kent	10,169.05			10,169.05								10,169.05	10,169.05
Queen Anne's	59,790.80			59,790.80								59,790.80	59,790.80
St. Mary's	7,452.76			7,452.76								7,452.76	7,452.76
Talbot	7,195.43			7,195.43								7,195.43	7,195.43
Worcester	59,063.88			59,063.88								59,063.88	59,063.88
TOTAL	\$ 305,206.81			\$ 305,206.81								\$ 305,206.81	\$ 305,206.81
COUNTY CONSTRUCTION FUNDS:													
Allegany	\$ 77,369.47	\$ 181,625.00	\$ 231,375.42	\$ 335,631.31			\$ 154,006.31	250.00				\$ 154,006.31	\$ 335,631.31
Anne Arundel	3,751.28	1,230.00	416.86	1,981.28			3,696.00	450.00				4,392.28	4,392.28
Cecil	416.86	450.00	2,025.43	3,210.00				61,030.00				61,030.00	61,030.00
Charles	2,025.43	3,210.00	2,025.43	61,030.00				63,512.00				63,512.00	63,512.00
Dorchester		61,030.00		61,030.00				84,730.54		29.06		84,730.54	84,730.54
Frederick	29.06	63,512.00	65,536.88	179,670.54				250.00				250.00	250.00
Harford	19,193.66	94,949.00	25,000.00	7,859.00				43,493.38				43,493.38	43,493.38
Howard	4,999.03	15,258.00	38,494.35	58,751.38				5,191.97				5,191.97	5,191.97
Kent	30,207.97	32,520.00	172,705.90	135,678.36				103,158.36				103,158.36	135,678.36
Prince George's	69,547.54		25,899.94	26,707.94				161,153.80				161,153.80	26,707.94
Queen Anne's	26,368.34		339.60	81,000.00				2,000.77				2,000.77	26,368.34
St. Mary's	90,153.80	91,800.00	81,000.00	252,953.80				584,639.07				584,639.07	252,953.80
Washington	3,236.26	18,600.00		21,836.26				18,600.00				18,600.00	21,836.26
Worcester													
TOTAL	\$ 318,855.48	\$ 571,784.00	\$ 617,794.38	\$ 1,157,742.90			\$ 584,639.07	\$ 571,784.00		\$ 1,319.83		\$ 571,784.00	\$ 1,157,742.90

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND:	\$	\$	\$	\$	\$	\$	\$	\$	\$
Alegany	90,005.29	29,577.87	60,517.42	90,005.29	29,577.87	60,517.42	90,005.29	29,577.87	60,517.42
Anne Arundel	58,551.53	45,381.46	13,073.07	58,551.53	45,381.46	13,073.07	58,551.53	45,381.46	13,073.07
Baltimore	94,376.80	94,376.80		94,376.80	94,376.80		94,376.80	94,376.80	
Calvert	3,127.67	3,127.67		3,127.67	3,127.67		3,127.67	3,127.67	
Caroline	35,571.68	27,371.58	8,200.10	35,571.68	27,371.58	8,200.10	35,571.68	27,371.58	8,200.10
Carroll	58,773.46	45,569.89	13,203.57	58,773.46	45,569.89	13,203.57	58,773.46	45,569.89	13,203.57
Cecil	8,304.50		8,304.50	8,304.50		8,304.50	8,304.50		8,304.50
Charles	1,962.13		1,962.13	1,962.13		1,962.13	1,962.13		1,962.13
Dorchester	43,595.24	30,333.18	13,262.06	43,595.24	30,333.18	13,262.06	43,595.24	30,333.18	13,262.06
Fredrick	84,178.59	58,522.50	25,656.09	84,178.59	58,522.50	25,656.09	84,178.59	58,522.50	25,656.09
Garrett	54,512.15	41,734.49	12,777.66	54,512.15	41,734.49	12,777.66	54,512.15	41,734.49	12,777.66
Harford	53,219.65	33,680.41	19,539.24	53,219.65	33,680.41	19,539.24	53,219.65	33,680.41	19,539.24
Howard	20,412.36	20,412.36		20,412.36	20,412.36		20,412.36	20,412.36	
Kent	3,135.09		3,135.09	3,135.09		3,135.09	3,135.09		3,135.09
Montgomery	89,722.08	54,641.74	35,080.34	89,722.08	54,641.74	35,080.34	89,722.08	54,641.74	35,080.34
Prince George's	106,352.12	41,073.62	65,278.50	106,352.12	41,073.62	65,278.50	106,352.12	41,073.62	65,278.50
Queen Anne's	2,994.41		2,994.41	2,994.41		2,994.41	2,994.41		2,994.41
St. Mary's	633.96		633.96	633.96		633.96	633.96		633.96
Somerset	22,089.20	17,274.40	4,814.80	22,089.20	17,274.40	4,814.80	22,089.20	17,274.40	4,814.80
Talbot	12,020.27		12,020.27	12,020.27		12,020.27	12,020.27		12,020.27
Washington	104,013.73	38,806.80	65,206.93	104,013.73	38,806.80	65,206.93	104,013.73	38,806.80	65,206.93
Wicomico	55,088.68	34,121.58	20,967.10	55,088.68	34,121.58	20,967.10	55,088.68	34,121.58	20,967.10
Worcester	10,978.61		10,978.61	10,978.61		10,978.61	10,978.61		10,978.61
TOTAL	\$ 1,013,742.20	\$ 612,978.68	\$ 400,763.52	\$ 1,013,742.20	\$ 612,978.68	\$ 400,763.52	\$ 1,013,742.20	\$ 612,978.68	\$ 400,763.52

SUMMARY

COUNTY MAINTENANCE FUNDS	\$ 305,206.81	\$ 571,784.00	\$ 584,639.07	\$ 571,784.00	\$ 305,206.81
COUNTY CONSTRUCTION FUNDS	<i>37,855.48</i>				<i>1,319.83</i>
COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND	1,013,742.20	\$ 571,784.00	\$ 584,639.07	\$ 571,784.00	1,013,742.20
TOTAL	\$1,287,113.53	\$ 571,784.00	\$ 584,639.07	\$ 571,784.00	\$2,476,691.91

Italics indicate red figures.

EXHIBIT E, Schedule 2

**BONDED DEBT AND DEBT SERVICE FUNDS
COMBINED BALANCE SHEET, JUNE 30, 1957**

	STATE HIGHWAY CONSTRUCTION BONDS		STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS		COUNTY HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS		
	STATE HIGHWAY CONSTRUCTION BONDS	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	COUNTY HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	COUNTY HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	
TOTAL	STATE HIGHWAY CONSTRUCTION BONDS	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	COUNTY HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	COUNTY HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS	
	Bonds	Bonds, Sinking Funds	Series A, C, D, and E	Series F, G, H, I, and J	First Series	Second Series	Third Series
ASSETS							
CASH WITH STATE TREASURER	\$ 227,997.97		\$ 198,476.28	\$ 20,665.28	\$	\$ 4,110.87	\$ 1,397.33
INVESTMENT IN UNITED STATES TREASURY OBLIGATIONS:							
At Cost:							
Bills due July 25, 1957 (maturity value \$1,805,000)	1,791,365.80		1,687,176.49				
Bills due August 15, 1957 (maturity value \$13,000)	13,000.81						
Notes 2 1/2% due August 15, 1957 (maturity value \$60,000)	59,570.00						
Bills due August 29, 1957 (maturity value \$600,000)	595,270.00			595,270.00		39,691.20	64,498.20
Bills due September 5, 1957 (maturity value \$800,000)	802,311.00						
Bills due September 26, 1957 (maturity value \$1,800,000)	1,785,291.00			1,785,291.00		59,700.00	
Bonds 2 1/2% due June 15, 1958 (maturity value \$1,800,000)	61,877.81						61,877.81
Notes 17 3/4% due February 15, 1959 (maturity value \$292,000)	197,116.00						
Bonds 2 1/2% due June 15, 1967 62 (maturity value \$3,000,000)	2,961,218.75		2,961,218.75				
Bonds 2 1/2% due December 15, 1968 63 (maturity value \$3,000,000)	2,938,906.25		2,938,906.25				
DEBT SERVICE FUNDS WITH PAYING AGENT FOR PAYMENT OF: MATURED BONDS AND INTEREST DUE FROM PAYABLE (including interest coupon payable July 1, 1957, \$976,587)	599,622.81						
BONDS PAYABLE JULY 1, 1957	480,000.00	\$ 100,000.00					
FUTURE TAX RECEIPTS ENCUMBERED AND FACTORS OF EXISTING SINKING FUNDS RESERVES FOR THE REDEMPTION OF STATE HIGHWAY CONSTRUCTION BONDS:							
Series A, C, D, and E	63,675,000.00	63,675,000.00					
Second Issue, Series F, G, H, I, and J	93,100,000.00	93,100,000.00					
COUNTY HIGHWAY CONSTRUCTION BONDS:							
First Series	1,170,000.00						
Second Series	1,531,000.00						
Third Series	1,567,000.00						
TOTAL	\$173,619,648.35	\$157,175,000.00	\$7,797,989.91	\$3,870,906.18	\$ 138,524.38	\$ 190,826.74	\$ 128,409.81

	\$	599,622.84	\$	9,212.14	\$	577,333.20	\$	12,200.00	\$	250.00	\$	627.50
LIABILITIES												
MATURED BONDS AND INTEREST COUPONS PAYABLE												
BONDS PAYABLE:												
STATE HIGHWAY CONSTRUCTION BONDS:												
Series A, C, D, and E:												
Series A		\$12,000,000.00										
Series C		15,003,000.00										
Series D		16,670,000.00										
Series E		20,002,000.00										
Second Issue:												
Series F		24,200,000.00										
Series G		24,600,000.00										
Series H		14,700,000.00										
Series I		15,000,000.00										
Series J		15,000,000.00										
COUNTY HIGHWAY CONSTRUCTION BONDS:												
First Series		1,250,000.00				\$1,250,000.00						
Second Series		1,531,000.00				1,531,000.00						
Third Series		1,567,000.00				1,567,000.00						
RESERVES—SINKING FUNDS:												
STATE HIGHWAY CONSTRUCTION BONDS:												
Series A, C, D, and E		7,788,777.77		7,788,777.77								
Second Issue, Series F, G, H, I, and J		3,263,573.25		3,263,573.25								
COUNTY HIGHWAY CONSTRUCTION BONDS:												
First Series		126,324.38					126,324.38					
Second Series		190,576.74					190,576.74					
Third Series		127,773.34					127,773.34					
TOTAL		\$173,649,648.35		\$7,797,989.91		\$3,870,906.48		\$138,524.38		\$190,826.74		\$128,400.84

EXHIBIT E, Schedule 3

STATEMENT OF ROADS SYSTEM AND OTHER FIXED ASSETS
FOR THE FISCAL YEAR ENDED JUNE 30, 1957

	ADDITIONS					TOTAL	DEDUCTIONS	BALANCE, JUNE 30, 1957
	STATE SYSTEM CONSTRUCTION FUND			MAINTENANCE FUND	TOTAL			
	PROGRAM PRIOR TO JULY 1, 1951, AND GENERAL OPERATING	TWELVE-YEAR PROGRAM						
ROADS SYSTEM:								
BALANCE, JULY 1, 1956								
Roads	\$385,112.55	\$4,551.54	\$8,876,500.65	\$6,588,070.40	\$15,461,571.05		\$100,577,125.59	
Bridges (since May, 1929)	51,105,443.10		3,873,922.45	1,282,877.22	5,156,799.37		56,261,942.47	
Traffic Control Facilities (since July, 1918)	449,643.55		53,117.48	22,174.95	75,322.43		524,965.98	
TOTAL ROADS SYSTEM	\$436,667,341.19		\$12,803,570.28	\$7,893,122.57	\$20,696,692.85		\$457,364,034.04	
OTHER FIXED ASSETS:								
Lands and Buildings	\$ 2,355,716.45				\$ 161,953.05	\$ 2,048.30	\$ 2,515,621.20	
Engineering Equipment	306,345.31				29,076.14	3,055.74	332,365.71	
Office Equipment	560,707.48				52,791.93	591.75	612,907.66	
Shop, Storeroom, and Yard Equipment	631,601.80				19,590.43	6,623.51	644,568.72	
Snow Fence and Posts	121,078.52				22,144.54	3,692.03	139,531.03	
Transportation Equipment—Motor Vehicles	624,246.39				63,282.66	73,030.05	614,499.00	
Road Maintenance and Construction Equipment:								
Motor Vehicles	3,941,671.43				403,215.81	392,604.89	3,952,282.35	
Other Than Motor Vehicles	1,026,258.67				75,193.33	30,467.43	1,071,984.57	
Laboratory Equipment	102,717.41				5,250.37		107,976.78	
TOTAL OTHER FIXED ASSETS	\$ 9,970,443.46				\$ 832,507.26	\$ 512,113.70	\$ 10,290,837.02	
TOTAL	\$446,637,784.65		\$12,803,570.28	\$ 7,893,122.57	\$ 21,529,200.11	\$ 512,113.70	\$467,654,871.06	

NOTES:

This statement does not include construction work in progress at June 30, 1957.
The balance of \$467,654,871.06 at June 30, 1957, has not been reduced by the book value of certain capital property dispositions in prior periods not reported for record, such book value being indeterminate.

EXHIBIT F

COMBINED STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1957
(INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	Total	CONSTRUCTION PROGRAM FUND AND GENERAL OPERATING FUND	CONSTRUCTION PROGRAM AND FEDERAL INTERSTATE PROGRAM CONSTRUCTION FUND	MAINTENANCE FUND	COUNTY AND MUNICIPALITY FUNDS (Schedules 1, 2, 3)	SINKING FUNDS (Schedule D)
REVENUES:						
Gasoline Tax Fund:						
50% portion	\$ 23,531,812.11		\$ 11,651,575.11		\$ 9,066,191.26	\$ 8,897,267.00
20% portion	9,112,736.82		7,731,811.80			346,515.56
Excise tax on certificates of title to motor vehicles	10,302,124.12					2,567,279.32
Motor Vehicle Revenue Fund:						
50% portion	6,190,836.62			\$ 6,190,836.62		
20% portion	2,176,331.61			51,951.17		
Tolls, Williamsport Toll Bridge	2,582,812.71	\$ 230,858.51				
Federal aid	13,227,031.91	532,017.83	11,506,331.55		1,188,019.53	
Specific work authorizations - Baltimore	19,665.36	19,665.36				
Sales of specifications	18,981.28			18,981.28		
Sale of new, old, and scrap materials, and miscellaneous income	66,101.55			66,101.55		
Rental of properties	181,101.50			181,101.50		
Reimbursements by counties	185,569.40				185,569.40	
Insurance recoveries	16,666.06			16,666.06		
Sign Permit Fund	11,261.61			11,261.61		
Proceeds from sale of State Highway Construction Bonds	30,018,799.58	30,000,000.00	30,000,000.00		1,567,000.00	18,799.58
Proceeds from sale of County Highway Construction Bonds	1,568,661.05					1,661.05
Net income from United States Treasury obligations	569,598.08		291,071.78			
Reimbursement from Toll System Facilities, etc., for advances	31,122.11					
Reimbursement of the cost of enforcing weight-and-size limitations on motor vehicles	308,851.63					
Collection for account of Toll System Facilities	112.00					
Participated in costs by political subdivisions and others (Schedule 5)	1,305,084.12		922,377.36			
Proceeds from sale of equipment - Chesapeake Bay Toll Bridge Construction Fund Reserve	1,000.00	1,000.00		3,000.00		
Received from Washington and Berkeley Bridge Company (a dissolved corporation) funds to provide for outstanding dividend checks	661.48					
Recovery of expenditures from miscellaneous sources	191,189.28		354,262.05		5.33	
Unclaimed salary-and-wage checks restored to cash balance	781.82		1,800,000.00			
Transfer of tax revenues to Maintenance Fund						
TOTAL REVENUES	\$100,555,599.11	\$ 1,736,521.01	\$ 63,551,095.65	\$ 8,344,298.81	\$ 11,711,270.52	\$ 12,176,503.12

EXPENDITURES:								
Construction costs:	\$ 59,805,363.15	\$ 5,332,844.73	\$ 53,793,644.32	\$ 7,367,893.76	\$ 678,874.10			
Maintenance costs:	9,530,210.36			51,852.57	2,162,316.60			
Operation and maintenance of Williamsport Toll Bridge:	51,852.57			721,011.31				
Capital properties acquired:	729,311.31			2,000.00	8,300.00			
Ocean beach protection:	2,000.00			31,275.35				
Sign Permit Fund:	31,275.35			4,763.41				
Repairs and maintenance of rental properties:	4,763.41							
Payment of tax apportionments:								
Counties:	8,097,456.53				8,097,456.53			
Municipalities:	1,057,876.97				1,057,876.97			
Advances for account of Toll System Facilities, etc.:								
Specific work authorizations—billwork:	29,368.90	29,368.90						
Federal aid apportioned to:	81,633.87	81,633.87						
Baltimore City—Urban Program:	625,940.00				625,940.00			
Dorchester County—Secondary Program:	45,180.00				45,180.00			
Frederick County—Secondary Program:	77,256.95				77,256.95			
Hartford County—Secondary Program:	41,980.00				41,980.00			
Howard County—Secondary Program:	22,580.00				22,580.00			
Somerset County—Secondary Program:	18,271.00				18,271.00			
Washington County—Secondary Program:	7,740.00				7,740.00			
Wicomico County—Secondary Program:	9,850.00				9,850.00			
Funds deposited with paying agent for debt service:								
State Highway Construction Bonds:								
Series A to E Issue:								
Maturities:	6,493,000.00							6,493,000.00
Interest:	1,216,377.33							1,216,377.33
Second Issue:								
Maturities:	100,000.00							1,000,000.00
Interest:	2,048,447.00							2,048,447.00
County Highway Construction Bonds, First and Second Series:		310,248.45						100,000.00
Maturities:	100,000.00							89,311.25
Interest:	89,311.25							
Net proceeds from sale of County Highway Construction Bonds, Third Series, apportioned to participating counties:	38,967.42		38,967.42					9,655.14
State Highway Construction Bonds—Series I and J:	9,655.14							
County Highway Construction Bonds—Third Series:	412.00	412.00						
Remittances of collections to Toll System Facilities:								
Net increase in book value of inventories of materials and supplies:	1,557,344.80							1,557,344.80
Payment to State of Maryland (balance of Maintenance Fund):	76,444.59							76,444.59
Payment to Worcester County (portion of balance of Maintenance Fund):	200,000.00							200,000.00
Net increase in book value of inventories of materials and supplies:	377,527.55		377,527.55					
TOTAL EXPENDITURES:	\$ 83,893,646.26	\$ 6,132,035.80	\$ 53,832,611.74	\$ 8,178,796.40	\$ 14,697,096.74	\$ 11,053,135.58		
Expenditures subsequently recovered (see receipts):	494,189.28	138,591.85	354,292.05	1,300.05	5.33			
TOTAL DISBURSEMENTS:	\$ 94,387,835.54	\$ 6,270,627.65	\$ 54,186,903.79	\$ 8,180,096.45	\$ 14,697,072.07	\$ 11,053,135.58		
EXCESS OF REVENUES OVER DISBURSEMENTS (Excess of disbursements in italics):	\$ 6,167,763.60	\$ 4,534,106.64	\$ 9,367,191.86	\$ 164,112.39	\$ 47,198.45	\$ 1,125,367.51		
CASH AND INVESTMENTS, JULY 1, 1956:	26,949,352.56	9,015,726.79	2,078,858.18	3,311,194.54	1,239,915.08	10,403,657.97		
CASH AND INVESTMENTS, JUNE 30, 1957:	\$ 9,916,734.02	\$ 4,481,620.15	\$ 11,901,354.00	\$ 3,475,306.93	\$ 1,287,113.53	\$ 227,997.97		
Cash With State Treasurer:	23,200,351.54					11,299,027.54		
Investment in United States Treasury obligations:	\$ 33,117,116.16	\$ 4,481,620.15	\$ 12,346,050.04	\$ 3,475,306.93	\$ 1,287,113.53	\$ 11,327,025.51		

Note — This statement does not reflect the cost of United States Treasury obligations purchased, \$76,045,699.33; that portion of the proceeds from sales or redemptions representing the amounts originally invested, \$67,852,596.82; nor collections for account of the State Treasurer consisting of fees for the issuance of sign licenses, \$3,079.16, and hauling permits, \$296,880.00, applicable to the General Fund and to the Motor Vehicle Revenue Fund, respectively.

Italics indicate red figures.

EXHIBIT F, Schedule 1

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND (INCLUDING BOND PROCEEDS)
 STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1957

COUNTIES	REVENUES		EXPENDITURES					TOTAL	CASH BALANCE, JUNE 30, 1957		
	CASH BALANCE, JAN 1, 1956	ALLOCATION OF 20% SHARE OF TAX AND MOTOR VEHICLE REVENUE (Schedule H)	TOTAL	TOTAL FUNDS AVAILABLE	PAYMENTS TO COUNTY AND MUNICIPALITIES	COUNTY HIGHWAY CONSTRUCTION BONDS SINKING FUND	PAYMENTS OF COUNTY HIGHWAY CONSTRUCTION BONDS PROCEEDS			TRANSFERS TO COUNTY MAINTENANCE FUNDS	TRANSFERS TO COUNTY CONSTRUCTION FUNDS
Allegany	\$ 26,359.02	\$ 111,909.18	\$ 111,909.18	\$ 138,268.20	\$ 395,826.96	\$ 12,863.37	\$ 408,690.33	\$ 29,577.87			
Anne Arundel	10,738.80	632,163.12	632,163.12	673,002.22	509,158.22	82,851.06	1,741,135.69	15,481.46			
Baltimore	82,007.39	1,311,910.82	1,756,265.10	1,828,812.10	1,226,320.35	5,511.13	197,636.58	94,376.80			
Calvert		167,811.15	167,811.15	167,696.58	346,020.12		346,020.12	27,371.58			
Caroline	39,296.37	373,391.70	373,391.70	373,391.70	346,020.12		621,211.37	45,669.89			
Cecil		627,481.89	627,481.89	666,781.25	357,705.83		357,705.83				
Charles		357,705.83	357,705.83	357,705.83	295,501.40	6,951.79	295,501.40				
Dorchester	27,296.58	144,772.10	144,772.10	112,068.98	111,735.80		111,735.80	39,333.18			
Frederick	53,085.12	815,718.49	815,718.49	1,136,031.41	735,206.13	71,691.68	200,200.83	58,325.50			
Garret	38,991.57	594,231.80	594,231.80	549,935.61	536,429.26	55,059.02	1,005,211.26	11,734.19			
Harford	31,263.95	176,360.75	176,360.75	307,621.70	473,941.29		173,911.26	33,680.41			
Howard	17,101.33	283,303.08	283,303.08	300,107.41	279,969.05		279,969.05	29,112.36			
Kent		225,253.78	225,253.78	225,253.78	300,107.41		225,253.78				
Montgomery	19,698.55	782,167.59	1,046,168.02	1,090,137.17	712,122.39	65,012.10	261,361.03	54,641.71			
Prince George's	37,271.36	577,611.15	577,611.15	611,285.51	573,211.89		1,011,105.13	41,073.62			
Queen Anne's		382,011.21	382,011.21	382,011.21	19,691.92	8,978.13	323,371.19				
St. Mary's		353,395.37	353,395.37	353,395.37	21,940.47		243,069.28				
Somerset		242,731.02	242,731.02	242,731.02	241,424.27		241,424.27	17,271.10			
Talbot	15,967.65	236,022.64	236,022.64	236,022.64	185,817.79		236,022.64				
Washington	31,639.10	535,272.48	723,129.27	508,666.57	481,555.23	18,619.55	139,252.56	38,806.80			
Wicomico	30,937.45	177,078.62	177,078.62	177,078.62	173,914.99		173,914.99	34,121.58			
Worcester		360,536.05	360,536.05	360,536.05	360,536.05		360,536.05				
BOND ISSUANCE EXPENSES		9,655.11	9,655.11	9,655.11			9,655.11				
TOTAL COUNTIES	\$ 525,550.74	\$ 10,800,661.59	\$ 12,367,661.59	\$ 12,863,212.33	\$ 8,105,756.53	\$ 385,425.20	\$ 1,567,000.00	\$ 2,116,297.92	\$ 12,289,233.65		
MUNICIPALITIES	37,023.02	1,088,498.87	1,088,498.87	1,458,640.49	1,057,876.97				1,057,876.97		
TOTAL COUNTIES AND MUNICIPALITIES	\$ 895,781.36	\$ 11,889,071.46*	\$ 13,456,071.46	\$ 14,351,852.82	\$ 9,163,633.50	\$ 385,425.20	\$ 1,567,000.00	\$ 2,116,297.92	\$ 13,338,110.62		

* Includes \$385,425.20 transferred to County Highway Construction Bonds Sinking Funds.

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND

STATEMENT OF REVENUES AND EXPENDITURES FOR ACCOUNT OF MUNICIPALITIES FOR THE FISCAL YEAR ENDED JUNE 30, 1957

MUNICIPALITY	ROAD MILES MUNICIPALITIES, DECEMBER, 1955	CASH BALANCE, JULY 1, 1956	REVENUES	TOTAL FUNDS AVAILABLE	EXPENDITURES	CASH BALANCE, JUNE 30, 1957
ALLEGANY COUNTY:						
Barton	2.26	\$ 628.12	\$ 1,861.81	\$ 2,492.93	\$ 1,900.34	\$ 592.59
Cumberland	113.71	28,500.38	93,826.51	122,326.89	76,280.44	46,046.45
Frostburg	24.65	5,894.55	20,339.67	26,234.22	19,814.25	6,419.97
Lonaconing	5.80	1,502.34	4,785.80	6,288.14	1,795.20	1,492.94
Luke	2.98	2,417.44	2,458.91	4,876.35	2,417.41	2,458.91
Midland	2.74	677.58	2,260.88	2,938.46	2,211.73	726.73
Westonport	10.67	2,721.08	8,804.23	11,525.31	8,745.48	2,779.83
TOTAL	162.81	\$ 42,341.49	\$ 134,340.81	\$ 176,682.30	\$ 116,164.88	\$ 60,517.42
ANNE ARUNDEL COUNTY:						
Annapolis	50.29	\$ 12,844.61	\$ 41,496.22	\$ 54,340.83	\$ 41,267.76	\$ 13,073.07
CALVERT COUNTY:						
Chesapeake Beach	6.26	\$ 1,576.99	\$ 5,165.36	\$ 6,742.35	\$ 5,111.73	\$ 1,630.62
North Beach	5.73	1,437.30	4,728.05	6,165.35	4,668.30	1,497.05
TOTAL	11.99	\$ 3,014.29	\$ 9,893.41	\$ 12,907.70	\$ 9,780.03	\$ 3,127.67
CAROLINE COUNTY:						
Denton	9.40	\$ 2,354.87	\$ 7,756.30	\$ 10,111.17	\$ 7,664.38	\$ 2,446.79
Federalsburg	6.35	1,631.33	5,239.64	6,870.97	5,225.49	1,645.48
Goldsboro	.55	149.02	453.83	602.85	448.55	154.30
Greensboro	4.36	929.47	3,597.60	4,527.07	3,380.03	1,147.04
Henderson	.38	92.15	313.55	405.70	310.00	95.70
Hillsboro	.42	86.69	346.55	433.24	331.73	101.51
Preston	1.72	968.35	1,419.24	2,387.59	1,552.55	835.04
Ridgely	6.77	1,709.87	5,586.19	7,296.06	5,521.82	1,774.24
TOTAL	29.95	\$ 7,921.75	\$ 24,712.90	\$ 32,634.65	\$ 24,434.55	\$ 8,209.10
CARROLL COUNTY:						
Hampstead	2.00	\$ 511.96	\$ 1,650.27	\$ 2,162.23	\$ 1,703.16	\$ 459.07
Manchester	3.50	887.04	2,887.99	3,775.03	2,857.11	917.92
Mt. Airy	1.86	1,232.10	4,010.17	5,242.27	3,981.04	1,261.23
New Windsor	2.75	682.02	2,269.13	2,951.15	2,239.76	711.39
Sykesville	5.12	1,234.59	4,224.71	5,459.30	4,120.98	1,338.32
Taneytown	6.68	1,651.66	5,511.93	7,163.59	5,408.50	1,755.09
Union Bridge	5.78	1,443.50	4,769.30	6,212.80	4,636.38	1,576.42
Westminster	20.07	5,008.61	16,560.53	21,569.14	16,325.01	5,244.13
TOTAL	50.76	\$ 12,651.48	\$ 41,884.03	\$ 54,535.51	\$ 41,331.94	\$ 13,203.57
CECIL COUNTY:						
Cecilton	.70	\$ 116.22	\$ 577.60	\$ 693.82	\$ 507.53	\$ 186.29
Charlestown	3.04	709.44	2,508.42	3,217.86	2,431.21	786.65
Chesapeake City	3.07	768.92	2,533.18	3,302.10	2,516.75	785.35
Elkton	12.80	2,927.01	10,561.77	13,488.78	10,153.13	3,335.65
Northeast	3.91	1,767.92	3,226.29	4,994.21	3,089.46	1,904.75
Perryville	1.38	348.65	1,138.69	1,487.34	1,131.25	356.09
Port Deposit	.73	181.08	602.35	783.43	429.81	353.62
Rising Sun	2.24	558.07	1,848.31	2,406.38	1,810.25	596.13
TOTAL	27.87	\$ 7,377.31	\$ 22,996.61	\$ 30,373.92	\$ 22,069.42	\$ 8,304.50
CHARLES COUNTY:						
Indian Head	2.28	\$ 737.25	\$ 1,921.35	\$ 2,658.60	\$ 2,083.33	\$ 575.27
La Plata	5.50	1,911.66	4,634.86	6,546.52	5,129.66	1,416.86
TOTAL	7.78	\$ 2,648.91	\$ 6,556.21	\$ 9,205.12	\$ 7,212.99	\$ 1,992.13
DORCHESTER COUNTY:						
Cambridge	38.09	\$ 7,329.24	\$ 31,429.52	\$ 38,758.76	\$ 28,816.83	\$ 9,941.93
Eldorado	.28	76.84	231.04	307.88	232.56	75.32
Hurlock	7.16	1,810.13	5,908.00	7,718.13	5,858.53	1,859.60
Secretary	1.47	350.74	1,212.96	1,563.70	1,191.55	372.15
Vienna	2.06	755.37	1,699.78	2,455.15	1,442.09	1,013.06
TOTAL	49.06	\$ 10,322.32	\$ 40,481.30	\$ 50,803.62	\$ 37,541.56	\$ 13,262.06

EXHIBIT F, Schedule 1a—Continued

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND**STATEMENT OF REVENUES AND EXPENDITURES FOR ACCOUNT OF MUNICIPALITIES FOR THE FISCAL YEAR ENDED JUNE 30, 1957**

MUNICIPALITY	ROAD MILES MUNI- CIPALITIES, DECEMBER, 1955	CASH BALANCE, JULY 1, 1956	REVENUES	TOTAL FUNDS AVAILABLE	EXPEN- DITURES	CASH BALANCE, JUNE 30, 1957
FREDERICK COUNTY:						
Brunswick	16.82	\$ 4,188.64	\$ 13,878.83	\$ 18,067.17	\$ 13,703.49	\$ 4,363.98
Burkittsville	1.16	337.78	957.16	1,294.94	1,012.98	281.96
Emmitsburg	4.26	1,075.55	3,515.09	4,590.64	3,469.61	1,121.03
Frederick	55.08	13,625.39	45,448.63	59,071.02	44,748.14	14,322.88
Middletown	3.83	845.84	3,160.28	4,006.12	2,994.36	1,011.76
Mt. Airy	1.36	356.75	1,122.19	1,478.94	1,151.77	324.17
Myersville	.18	27.04	148.53	175.57	149.83	25.74
New Market	1.10	297.29	907.65	1,204.94	911.16	293.78
Thurmont	8.72	2,234.85	7,195.21	9,430.06	7,145.75	2,284.31
Walkersville	3.07	735.04	2,533.18	3,268.22	2,453.86	814.36
Woodsboro	1.69	432.36	1,394.48	1,826.84	1,017.72	809.12
TOTAL	97.27	\$ 24,156.53	\$ 80,261.23	\$ 104,417.76	\$ 78,761.67	\$ 25,656.09
GARRETT COUNTY:						
Accident	2.10	\$ 514.26	\$ 1,732.79	\$ 2,247.05	\$ 1,685.26	\$ 561.79
Deer Park	4.05	1,034.22	3,341.81	4,376.03	3,332.81	1,043.22
Friendsville	3.58	907.80	2,954.00	3,861.80	2,946.18	915.62
Grantsville	2.80	699.84	2,310.39	3,010.23	2,304.51	705.72
Kitzmilller	3.44	877.29	2,838.48	3,715.77	2,828.93	886.84
Loch Lynn Heights	4.14	1,995.01	3,416.07	5,411.08	3,390.79	2,020.29
Mountain Lake Park	11.09	2,794.98	9,150.78	11,945.76	9,083.61	2,862.15
Oakland	14.57	3,617.42	12,022.27	15,639.69	11,857.66	3,782.03
TOTAL	45.77	\$ 12,440.82	\$ 37,766.59	\$ 50,207.41	\$ 37,429.75	\$ 12,777.66
HARFORD COUNTY:						
Aberdeen	24.76	\$ 5,991.77	\$ 20,430.43	\$ 26,422.20	\$ 19,994.83	\$ 6,427.37
Bel Air	13.14	6,296.39	10,842.32	17,138.71	10,728.68	6,410.03
Havre de Grace	25.84	6,527.69	21,321.58	27,849.27	21,147.43	6,701.84
TOTAL	63.74	\$ 18,815.85	\$ 52,594.33	\$ 71,410.18	\$ 51,870.94	\$ 19,539.24
KENT COUNTY:						
Betterton	1.43	\$ 486.01	\$ 1,421.13	\$ 1,907.14	\$ 1,469.19	\$ 437.95
Chestertown	5.61	1,906.54	5,575.20	7,481.74	5,789.98	1,691.76
Galena	.44	146.27	437.27	583.54	457.60	125.94
Millington	.84	278.40	834.78	1,113.18	851.91	261.27
Rock Hall	2.04	693.63	2,027.35	2,720.98	2,102.81	618.17
TOTAL	10.36	\$ 3,510.85	\$ 10,295.73	\$ 13,806.58	\$ 10,671.49	\$ 3,135.09
MONTGOMERY COUNTY:						
Barnesville	.45	\$ 136.83	\$ 371.31	\$ 508.14	\$ 379.44	\$ 128.70
Brookeville	.20		165.03	165.03	121.30	43.73
Chevy Chase, Section III	2.22	544.92	1,831.81	2,376.73	1,818.62	558.11
Chevy Chase, Section IV	6.21	1,555.32	5,124.11	6,679.43	5,073.16	1,606.27
Chevy Chase, Section V	1.61	783.08	1,328.47	2,111.55	1,325.50	786.05
Chevy Chase View	3.35	1,623.13	2,764.22	4,387.35	2,743.74	1,643.61
Chevy Chase Village	7.26	1,868.93	5,990.50	7,859.43	5,993.31	1,866.12
Drummond	.39	87.98	321.81	409.79	330.59	79.20
Friendship Heights	.88	199.98	726.12	926.10	685.19	240.91
Gaithersburg	5.89	1,411.95	4,860.07	6,272.02	4,747.84	1,524.18
Garrett Park	3.09	809.64	2,549.68	3,359.32	2,568.54	790.78
Glen Echo	1.89	862.63	1,485.25	2,347.88	1,477.15	870.73
Kensington	7.22	3,413.53	5,957.50	9,371.03	5,835.49	3,535.54
Laytonsville	.29	63.95	239.29	303.24	245.90	57.34
Martins Additions	2.28	610.05	1,881.31	2,491.36	1,883.75	607.61
North Chevy Chase	1.62	400.79	1,336.72	1,737.51	1,310.57	426.94
Oakmont	.52	255.90	429.07	684.97	436.65	248.32
Poolesville	.76	217.07	627.11	844.18	641.65	202.53
Rockville	50.65	11,805.75	41,793.27	53,599.02	40,555.00	13,044.02
Somerset	3.54	874.41	2,920.99	3,795.40	2,875.94	919.46
Takoma Park	19.40	4,948.63	16,007.69	20,956.32	15,926.69	5,029.63
Washington Grove	3.26	834.11	2,689.95	3,524.06	2,653.70	870.36
TOTAL	122.89	\$ 33,308.58	\$ 101,401.28	\$ 134,709.86	\$ 99,629.52	\$ 35,080.34

EXHIBIT F, Schedule 1a—Continued

EXHIBIT F, Schedule 1a— Concluded

COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND**STATEMENT OF REVENUES AND EXPENDITURES FOR ACCOUNT OF MUNICIPALITIES FOR THE FISCAL YEAR ENDED JUNE 30, 1957**

MUNICIPALITY	ROAD MILES MUNICI- PALITIES, DECEMBER, 1955	CASH BALANCE, JULY 1, 1956	REVENUES	TOTAL FUNDS AVAILABLE	EXPEN- DITURES	CASH BALANCE, JUNE 30, 1957
PRINCE GEORGE'S COUNTY:						
Berwyn Heights	5.48	\$ 1,390.93	\$ 4,521.76	\$ 5,912.69	\$ 4,487.40	\$ 1,115.29
Bladensburg	7.50	1,869.37	6,188.54	8,057.91	6,100.59	1,957.32
Bowie	4.42	1,095.53	3,647.11	4,742.64	3,612.85	1,129.79
Brentwood	7.09	1,746.95	5,850.24	7,597.19	5,763.96	1,833.23
Capitol Heights	6.37	1,698.77	5,256.13	6,954.90	5,287.27	1,667.63
Cheverly	11.89	2,964.90	9,810.90	12,775.80	9,659.90	3,115.90
College Park	36.00	9,157.60	29,704.98	38,862.58	29,510.40	9,352.18
Colmar Manor	3.72	946.87	3,069.51	4,016.38	3,035.71	980.67
Cottage City	2.48	600.84	2,046.35	2,647.19	1,993.38	653.81
District Heights	11.92	5,431.51	9,835.65	15,267.16	12,180.08	3,087.08
Eagle Harbor	1.79	847.74	1,477.00	2,324.74	1,451.24	873.50
Edmonston	1.64	1,175.46	3,828.65	5,004.11	3,799.91	1,204.20
Fairmount Heights	5.14	1,270.40	4,241.21	5,511.61	4,162.65	1,348.96
Forest Heights	8.11	1,730.73	6,691.87	8,422.60	6,336.88	2,085.72
Glenarden	2.73	661.46	2,252.62	2,914.08	2,214.71	699.37
Greenbelt	13.60	3,352.19	11,221.89	14,574.08	11,061.85	3,509.23
Hyattsville	30.31	7,787.93	25,009.95	32,797.88	24,927.14	7,870.74
Landover Hills	4.27	1,082.38	3,523.34	4,605.72	3,492.58	1,113.14
Lantrel	17.54	4,190.95	14,172.93	18,663.88	14,099.54	4,564.34
Morningside	4.00	1,018.69	3,300.55	4,319.24	3,268.20	1,051.04
Mount Ranier	15.21	3,769.99	12,550.36	16,320.35	12,393.13	3,927.22
North Brentwood	2.23	566.47	1,840.06	2,406.53	1,851.91	554.62
Riverdale	11.74	2,881.87	9,687.13	12,569.00	9,523.29	3,045.71
Seat Pleasant	7.38	1,826.89	6,089.53	7,916.42	6,004.57	1,911.85
Takoma Park	10.90	2,738.19	8,994.01	11,732.20	8,807.58	2,924.62
University Park	8.55	2,094.87	7,054.94	9,149.81	6,915.29	2,234.52
Upper Marlboro	2.61	1,271.16	2,153.61	3,424.77	2,164.95	1,259.82
TOTAL	247.62	\$ 65,170.64	\$ 204,320.82	\$ 269,491.46	\$ 204,212.96	\$ 65,278.50
QUEEN ANNE'S COUNTY:						
Barclay	.42	\$ 264.90	\$ 346.55	\$ 611.45	\$ 264.90	\$ 346.55
Centerville	7.09	1,780.74	5,850.23	7,630.97	5,804.99	1,825.98
Church Hill	.46	138.28	379.57	517.85	395.66	122.19
Queentown	4.59	358.10	1,237.71	1,595.81	1,200.39	395.42
Sudlersville	1.00	231.87	825.14	1,057.01	793.42	263.59
Templeville	.10	57.18	82.51	139.69	99.01	40.68
TOTAL	10.57	\$ 2,831.07	\$ 8,721.71	\$ 11,552.78	\$ 8,558.37	\$ 2,991.41
ST. MARY'S COUNTY:						
Leonardtown	2.48	\$ 584.18	\$ 2,046.34	\$ 2,630.52	\$ 1,996.56	\$ 633.96
SOMERSET COUNTY:						
Crisfield	13.05	\$ 3,208.92	\$ 10,768.05	\$ 13,976.97	\$ 10,585.76	\$ 3,391.21
Princess Anne	5.52	1,207.97	4,554.77	5,762.74	4,339.15	1,423.59
TOTAL	18.57	\$ 4,416.89	\$ 15,322.82	\$ 19,739.71	\$ 14,924.91	\$ 4,814.80
TALBOT COUNTY:						
Easton	22.76	\$ 5,661.36	\$ 18,780.16	\$ 24,441.52	\$ 18,510.86	\$ 5,930.66
Oxford	4.19	1,958.81	3,457.33	5,416.14	3,371.79	2,044.35
St. Michaels	6.44	3,100.77	5,313.89	8,414.66	5,268.80	3,145.86
Trappe	1.09	819.33	899.40	1,178.73	819.33	899.40
TOTAL	34.48	\$ 11,540.27	\$ 28,450.78	\$ 39,991.05	\$ 27,970.78	\$ 12,020.27
WASHINGTON COUNTY:						
Boonsboro	4.39	\$ 1,098.18	\$ 3,622.36	\$ 4,720.54	\$ 3,586.61	\$ 1,133.93
Clearspring	2.14	1,363.43	1,765.79	3,129.22	2,091.50	1,037.72
Funkstown	3.20	761.08	2,640.44	3,401.52	2,570.85	830.67
Hagerstown	113.09	54,983.14	93,314.92	118,298.06	93,058.37	55,239.69
Hancock	8.95	2,234.58	7,385.00	9,619.58	7,301.99	2,317.59
Keedysville	2.82	701.98	2,326.89	3,028.87	2,285.55	743.32
Sharpsburg	5.14	1,298.60	4,241.21	5,539.81	4,194.28	1,345.53
Smithsburg	3.25	801.62	2,681.70	3,483.32	2,656.66	826.66
Williamsport	6.65	1,650.72	5,487.17	7,137.89	5,406.04	1,731.85
TOTAL	149.63	\$ 61,893.33	\$ 123,465.48	\$ 188,358.81	\$ 123,151.88	\$ 65,206.93
WICOMICO COUNTY:						
Delmar	6.15	\$ 1,386.30	\$ 5,074.60	\$ 6,460.90	\$ 4,851.09	\$ 1,609.81
Fruitland	5.78	1,211.94	4,769.30	5,981.24	4,490.39	1,490.85
Mardela Springs	3.20	637.96	2,640.44	3,278.40	2,463.49	814.91
Salisbury	65.59	16,488.86	54,120.84	70,609.70	53,558.17	17,051.53
TOTAL	80.72	\$ 19,725.06	\$ 66,605.18	\$ 86,330.24	\$ 65,363.14	\$ 20,967.10
WORCESTER COUNTY:						
Berlin	7.63	\$ 2,137.58	\$ 6,295.80	\$ 8,433.38	\$ 6,140.97	\$ 1,992.41
Ocean City	11.70	2,504.34	9,654.12	12,158.46	9,108.29	3,050.17
Pocomoke City	13.70	2,910.56	11,304.40	14,214.96	10,651.24	3,563.72
Snow Hill	9.14	2,161.91	7,541.77	9,703.68	7,331.37	2,372.31
TOTAL	42.17	\$ 9,714.39	\$ 34,796.09	\$ 44,510.48	\$ 33,531.87	\$ 10,978.61
GRAND TOTAL	1,316.78	\$ 370,230.62	\$1,088,409.87	\$1,458,640.49	\$1,057,876.97	\$ 400,763.52

EXHIBIT F, Schedule 1b

**COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND
STATEMENT SHOWING ALLOCATION OF 20% SHARE OF GASOLINE TAX AND MOTOR VEHICLE
REVENUE FUNDS TO COUNTIES AND MUNICIPALITIES FOR THE FISCAL YEAR ENDED
JUNE 30, 1957**

COUNTY	ROAD MILES					ALLOCATION BASED ON TOTAL COUNTY ROAD MILES					SHARE
	COUNTIES EXCLUDING MUNICIPALITIES	MUNICIPALITIES	TOTAL	GASOLINE TAX	MOTOR VEHICLE REVENUE	MINIMUM SHARE - ADJUSTMENT	TOTAL	COUNTIES	MUNICIPALITIES		
ALLEGANY	106.30	162.81	662.01	\$ 131,163.10	\$ 111,221.10	\$ 2,137.21	\$ 516,219.99	\$ 111,900.18	\$ 131,310.81		
ANNE ARUNDEL	766.13	50.29	816.12	555,129.13	110,862.51	2,632.00	673,659.61	632,163.12	11,496.22		
BALTIMORE	1,363.60		1,503.60	1,015,122.67	271,951.66	3,137.51	1,311,910.82	1,311,910.82			
CALVERT	263.11		216.10	111,261.83	37,161.43	1,971.12	177,731.81	167,811.43	9,920.11		
CAROLINE	152.32	11.99	164.31	316,116.17	87,213.81	1,555.11	398,101.60	373,301.70	24,712.90		
CARROLL	700.16	20.26	720.42	572,018.81	130,965.32	2,615.21	669,338.92	627,381.89	41,957.03		
CECIL	123.51	27.87	151.38	332,581.81	70,006.01	1,187.11	380,702.11	357,705.82	22,996.61		
CHARLES	350.66	19.06	369.72	335,111.11	61,811.09	5,139.39	392,057.61	295,501.10	6,556.21		
DORCHESTER	592.67		1,085.89	361,838.65	65,103.71	1,778.69	155,253.79	111,772.10	40,481.30		
FREDERICK	988.62	15.77	1,004.39	712,131.15	132,151.12	2,169.21	896,400.79	815,718.19	80,361.23		
GARRETT	720.16	63.71	783.87	291,116.39	110,001.73	2,466.61	431,108.36	591,231.80	174,369.59		
HARFORD	313.31		313.31	228,171.16	49,238.73	2,006.67	282,313.08	282,303.08	52,591.33		
KENT	226.66	10.36	237.02	153,113.78	40,811.68	39,211.05	235,510.51	225,253.78	10,298.73		
MONTGOMERY	917.85	122.89	1,040.74	702,218.70	181,712.06	3,471.89	882,500.87	782,107.50	101,101.28		
PRINCE GEORGE'S	689.29	217.62	906.91	621,007.81	166,370.81	3,662.68	781,231.07	577,011.15	201,320.82		
QUEEN ANNE'S	402.78	10.57	413.35	271,065.51	71,315.09	1,522.57	343,903.32	322,310.32	8,274.71		
ST. MARY'S	321.09	2.18	323.27	212,205.49	53,362.71	1,013.11	266,600.06	242,143.72	8,216.31		
SOMERSET	291.17	18.57	312.74	265,102.90	53,362.16	1,008.22	318,465.81	212,721.02	15,229.82		
TALBOT	286.01	31.18	317.19	210,205.22	55,301.59	1,663.29	267,170.10	236,022.61	28,150.78		
WASHINGTON	651.13	119.63	800.76	528,158.90	138,160.58	2,381.52	668,701.00	517,272.18	123,465.18		
WICOMICO	578.18	80.72	658.90	432,123.18	113,681.51	2,124.19	548,929.80	477,578.62	66,605.18		
WONESTON	436.91	12.17	449.11	311,212.60	82,061.11	1,344.67	393,592.11	360,536.06	31,796.09		
TOTAL.....	13,035.72	1,316.78	14,352.50	\$ 9,112,736.82	\$ 2,476,231.61		\$ 11,889,071.46	\$ 10,800,661.50	\$ 1,088,409.87		

Italics indicate red figures.

EXHIBIT F, Schedule 2

COUNTY MAINTENANCE FUNDS
STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1957

	REVENUES				TOTAL FUNDS AVAILABLE	EXPENDITURES				TOTAL	CASH BALANCE JUNE 30, 1957	
	CASH BALANCE JULY 1, 1956	REMITTANCES BY COUNTIES	TRANSFERS FROM COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND	TRANSFERS FROM COUNTY CONSTRUCTION FUND		TOTAL	MAINTENANCE COSTS		PAYMENTS TO COUNTIES			TRANSFERS TO COUNTY CONSTRUCTION FUNDS
							REGULAR (Schedule 2a)	PURCHASE OF EQUIPMENT				
CALVERT COUNTY	\$ 12,321.51		\$ 159,330.00		\$ 171,651.51	\$ 151,472.31		\$ 60,011.59	\$ 159.96	\$ 151,887.27	\$ 16,761.27	
CAROLINE COUNTY	79,756.46				79,756.46	3,311.87				79,756.46		
CECIL COUNTY	39,842.05	\$ 87,918.58	377,705.83		485,496.46	396,436.61				396,436.61	89,059.85	
CHARLES COUNTY	17,722.28		288,780.62	\$ 251.01	336,502.90	310,792.13				310,792.13	25,710.77	
KENT COUNTY	73,591.63		225,253.78		298,845.41	181,361.86			77,311.50	258,676.36	40,169.05	
QUEEN ANNE'S COUNTY	5,012.63		323,371.19		318,383.82	258,568.36				258,568.36	59,796.80	
ST. MARY'S COUNTY	8,141.07	23,770.24	243,003.28		274,914.59	247,401.83				267,401.83	7,452.76	
TALBOT COUNTY	15,962.79	121,747.47	236,022.61		341,802.32	331,611.89		290,000.00		331,611.89	7,195.43	
WORCESTER COUNTY	153,569.57		360,536.05		514,105.62	255,041.74				155,041.74	59,063.88	
TOTAL	\$ 393,969.78	\$ 233,466.29	\$ 2,193,709.38	\$ 251.01	\$ 2,821,439.46	\$ 2,162,316.60	\$ 16,400.00	\$ 290,011.59	\$ 77,471.46	\$ 2,516,232.65	\$ 305,296.81	

Italics indicate red figures.

EXHIBIT F, Schedule 2a

COUNTY MAINTENANCE FUNDS
STATEMENT OF EXPENDITURES FOR MAINTENANCE OF COUNTY ROAD SYSTEMS
FOR THE FISCAL YEAR ENDED JUNE 30, 1957

	TOTAL	MATERIALS					GENERAL OPERATING EXPENSES									
		SALARIES, WAGES, AND EMPLOYEES' BENEFITS	AGGREGATES GRADED	AGGREGATES UNGRADED	LUMBER	PIPE AND PIPE BANDS	BITUMINOUS AND OTHER	SUPPLIES	RENTAL OF AUTOMOTIVE EQUIPMENT	RENTAL OF AUTOMOTIVE EQUIPMENT	HAULING MATERIALS	DIRECT ROAD WORK	USE OF SRC EQUIPMENT	CONTRACTUAL	OTHER	
CALVERT COUNTY																
Maintenance of roads—surfacing.....	\$ 42,381.63	\$ 25,674.18	\$ 2,372.39	\$ 1,640.10		\$ 4,008.67	\$ 73.02					\$ 8,604.97				
Maintenance of roads—grading.....	17,046.45	5,381.99	12,914.11									1,892.55			\$ 26,887.50	
Maintenance of road shoulders.....	3,012.38	1,646.00				73.60	.69					1,208.00				
Maintenance of road drainage.....	12,658.29	9,835.51			\$ 847.20	258.75	8.19					1,708.82				
Drainage structure repairs.....	1,922.22	1,866.80			\$ 2,263.87	34.06	58.00					699.70				
Maintenance of roadsides and dividing parkways.....	21,339.63	13,949.27		480.00		460.00	29.95					5,217.10			\$ 639.58	
Traffic services.....	2,136.11	1,732.16				4.16	7.22					379.70			12.87	
Undistributed costs:																
Vacation and other leave, pension and social security contributions, etc.....	10,331.51															
County equipment operation.....	1,136.31					98.93									60.50	
Portion of administrative and general expenses.....	9,762.78														9,762.78	
TOTAL.....	\$ 154,727.31	\$ 70,418.05	\$ 15,286.50	\$ 2,138.10	\$ 2,263.87	\$ 1,372.72	\$ 1,153.34					\$ 19,793.63			\$ 26,887.50	\$ 10,475.73
CAROLINE COUNTY																
Maintenance of roads—surfacing.....	\$ 202.73	\$ 202.73														
Maintenance of road drainage.....	386.62	386.62														
Drainage structure repairs.....	94.02	84.38			\$ 9.64											
Maintenance of roadsides and dividing parkways.....	1,059.87	1,044.12														
Undistributed costs:																
Vacation and other leave, pension and social security contributions, etc.....	1,263.54	1,263.54														
County equipment operation.....	100.48	11.95														
General repairs, etc.....	3.61	3.61													\$ 18.85	
Portion of administrative and general expenses.....	201.00														201.00	
TOTAL.....	\$ 3,311.87	\$ 2,996.95			\$ 9.64		\$ 69.68								\$ 219.85	\$ 18.85

CECIL COUNTY										
Maintenance of roads—surfacing	\$ 97,507.29	\$ 45,764.52	\$ 3,407.18	\$ 13,097.95	\$ 15,426.40	\$ 110.69	\$ 1,363.50	\$ 18,215.60	\$ 121.45	
Maintenance of roads—oilng	116,130.72	11,469.75	44,408.46		13,553	31.04		3,449.83	56,758.11	
Maintenance of road shoulders	10,773.33	7,105.72	111.32		120,660	4.24		3,430.45		
Maintenance of road drainage	43,580.14	23,170.72		\$ 27.50	72,556	96.71		5,956.16		
Drainage structure repairs	4,838.64	3,474.09		6.00	46.98			811.57		
Structure repairs	498.33	361.00			56.22	8.70		23.38		
Maintenance of roadsides and dividing parkways	17,560.63	13,336.76			87.89	218.21	153.00	3,005.80		\$ 15.82
Traffic services	3,262.86	2,126.58		69.60	100.45	37.05		947.81		81.37
Maintenance of bridges (over 20-foot span)	32,654.33	13,936.05		244.38	4,163.40	1,354.19	76.50	2,475.50		247.45
Undistributed costs:										
Vacation and other leave, pension and social security contributions, etc.										
County equipment operation	31,973.35							2,053.16		
General repairs, etc.	9,197.90	3,717.57		3.00	36.40	4,107.68				100.02
Portion of administrative and general expenses	772.52	336.34		10.64	262.43	7,009				
TOTAL	\$ 396,436.61	\$156,772.45	\$ 47,926.96	\$ 13,443.93	\$ 20,379.86	\$ 6,038.60	\$ 1,503.00	\$ 40,372.26	\$ 56,879.56	\$ 28,532.23
CHARLES COUNTY										
Maintenance of roads—surfacing	\$ 119,746.35	\$ 58,234.21	\$ 8,031.39	\$ 3,170.93	\$ 16,582.88	\$ 584.24	\$ 700.88	\$ 28,294.62	\$ 4,079.63	\$ 22.60
Maintenance of roads—oilng	68,476.14	16,870.91	21,747.52			29.97		3,881.69	25,946.05	
Maintenance of road shoulders	1,770.87	955.51		40.05	281.67	1.24		492.40		
Maintenance of road drainage	65,436.34	47,297.94	3.00	9.00	2.80	324.77		7,060.58		
Drainage structure repairs	211.14									
Maintenance of roadsides and dividing parkways	12,595.77	10,078.09				74.14		2,350.02		
Traffic services	2,201.75	1,989.07				.72		211.96		
Maintenance of bridges (over 20-foot span)	12.90	12.90								
Undistributed costs:										
Vacation and other leave, pension and social security contributions, etc.										
County equipment operation	17,865.48	17,865.48								
Portion of administrative and general expenses	2.18					2.18				
TOTAL	\$ 310,792.13	\$153,303.21	\$ 29,781.91	\$ 3,219.98	\$ 16,807.35	\$ 1,834.86	\$ 700.88	\$ 42,291.27	\$ 30,025.68	\$ 22,585.78

EXHIBIT F, Schedule 2a—Continued

ST. MARY'S COUNTY										
Maintenance of roads—surfacing	\$ 56,936.76	\$ 33,690.24	\$ 4,358.66	\$ 2,153.55	\$ 50.19	\$ 144.00	\$ 8,963.92	\$ 8,137.20	\$ 24,265.10	
Maintenance of roads—oiling	37,748.43	6,072.73	6,726.26		4.33		20.89	2,653.01	9.88	
Maintenance of road shoulders	8,695.19	6,506.09			1.31			2,159.80		
Maintenance of road drainage	44,139.03	41,651.81			261.38		7.30	4.00		
Drainage structure repairs	4,366.36	332.05			149.12					
Maintenance of roadsides and dividing parkways	35,744.12	34,754.98			484.96			711.90	18.48	
Traffic services	8,204.08	7,497.60			3.20			551.40	67.58	
Undistributed costs:										
Vacation and other leave, pension and social security contributions, etc.	43,022.08									
County equipment operation	7,842.92									
General repairs, etc.	782.72									
Portion of administrative and general expenses	19,980.14									
TOTAL	\$ 267,461.83	\$173,713.33	\$ 11,084.92	\$ 2,153.55	\$ 1,061.12	\$ 3,001.06	\$ 9,065.41	\$ 8,303.85	\$ 14,435.21	\$ 44,469.38
TALBOT COUNTY										
Maintenance of roads—surfacing	\$ 177,860.44	\$ 62,522.94	\$ 11,875.47	\$ 11,988.38	\$ 314.49	\$ 50,774.53	\$ 3,513.19	\$ 28,949.33	\$ 362.38	
Maintenance of roads—oiling	10,540.47	7,270.85	1,163.36		8.16	70.00		2,028.10		
Maintenance of road shoulders	69.53	69.53								
Maintenance of road drainage	21,750.82	14,460.34			152.75	144.00	1.79	4,085.15	740.00	
Drainage structure repairs	8,452.75	1,496.61			654.79		359.93	404.02	14.80	
Maintenance of roadsides and dividing parkways	49,247.85	18,641.14			55.35			6,832.79	2,050.15	
Traffic services	13,315.03	4,496.59			3.09			1,111.85	88.07	
Maintenance of bridges (over 20-foot span)	861.44	331.30			752.16			201.10	319.80	
Undistributed costs:										
Vacation and other leave, pension and social security contributions, etc.	21,993.33									
County equipment operation	5,598.90	995.98								
General repairs, etc.	37.79	11.26								
Portion of administrative and general expenses	24,883.54									
TOTAL	\$ 334,611.89	\$122,289.87	\$ 13,038.83	\$ 13,692.10	\$ 55.35	\$ 7,532.87	\$ 4,397.22	\$ 5,849.70	\$ 43,641.18	\$ 28,646.44

EXHIBIT F, Schedule 2a—Continued

EXHIBIT F, Schedule 2a Concluded

COUNTY MAINTENANCE FUNDS
STATEMENT OF EXPENDITURES FOR MAINTENANCE OF COUNTY ROAD SYSTEMS
FOR THE FISCAL YEAR ENDED JUNE 30, 1957

	TOTAL	MATERIALS				SUPPLIES	GENERAL OPERATING EXPENSES			OTHER		
		AGGREGATES		LUMBER	PIPE AND PIPE BANDS		FITTINGS AND OTHER	RENTAL OF AUTOMOTIVE EQUIPMENT			USAGE OF SRC EQUIPMENT	CONTRACTUAL
		GRADED	UNGRADED					HAULING MATERIALS	DIRECT ROAD WORK			
WORCESTER COUNTY												
Maintenance of roads—surfacing	\$ 71,183.06	\$ 6,706.74	\$ 1,617.90		\$ 2,083.05	\$ 313.18	\$ 12,916.98	\$ 19,018.36	\$ 37,313.87			
Maintenance of roads—oiling	67,350.39	14,302.00	1.25		31.67	9.05	5,263.61	2,919.17				
Maintenance of road shoulders	7,168.30	217.34					921.30	110.25				
Maintenance of road drainage	10,196.31					25.66	180.00	55.00				\$ 346.75
Drainage structure repairs	20,136.21	18.18	11.06		11.00	30.61	78.13	59.50				1,682.03
Maintenance of roadides and dividing parkways	18,311.70					283.49	102.00	8,971.00				217.75
Traffic services	570.59							236.00				
Maintenance of bridges over 20-foot span)	1,696.25					288.39		211.02				
Undistributed costs: Vacation and other leave, pension and social security contributions, etc.	26,315.03											
County equipment operation	8,098.96											112.58
General repairs, etc.	4,189.27			23.30		7,039.11						198.00
Portion of administrative and general expenses	16,282.01					12.54						16,282.01
TOTAL.....	\$ 255,041.74	\$ 21,244.62	\$ 1,632.51	\$ 2,464.17	\$ 13,150.90	\$ 8,002.26	\$ 19,465.02	\$ 26,892.10	\$ 37,313.87	\$ 17,227.12		
GRAND TOTAL.....	\$2,162,316.60	\$81,160.49	\$ 37,713.57	\$ 21,791.31	\$ 62,778.16	\$ 52,115.45	\$ 88,709.48	\$ 28,017.50	\$194,365.52	\$191,838.40		

Italics indicate red figures.

EXHIBIT F, Schedule 3

COUNTY CONSTRUCTION FUNDS
STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1957

	REVENUES				EXPENDITURES				CASH BALANCE JUNE 30, 1957			
	CASH BALANCE JULY 1, 1956	FEDERAL AID APPROXIMATE BY STATE	REMITTANCES BY COUNTIES	TRANSFERS FROM COUNTY MAINTENANCE FUNDS	TRANSFERS FROM GASOLINE TAX AND MOTOR VEHICLE REVENUE	TOTAL	TOTAL FUNDS AVAILABLE	CONSTRUCTION COSTS		FEDERAL AID REMITTED	TRANSFERS TO COUNTY MAINTENANCE FUNDS	TOTAL
ALLEGANY	\$ 37,126.25	\$290,975.00				\$290,975.00	\$247,101.25	\$324,470.36			\$324,470.36	\$ 77,369.11
ANNE ARUNDEL COUNTY	28,282.54		\$ 409.63	\$ 139.96	\$ 28,282.54	\$ 28,282.54	1,506.58	1,506.58			1,506.58	3,751.28
CALVERT COUNTY	936.99	11,600.00				11,600.00	3,751.28	868.06			868.06	1,618.86
CAROLINE COUNTY	7,848.72						451.30	2,025.43		\$ 234.01	2,259.44	2,025.43
CECIL COUNTY	491.20						45,180.00		\$ 45,180.00		45,180.00	2,259.44
CHARLES COUNTY	234.01						77,256.05		77,256.05		77,256.05	29.06
DORCHESTER COUNTY	29.06	55,969.89	50,845.91			106,844.85	77,423.51	17,249.85	44,980.00		59,220.85	19,183.66
FREDERICK COUNTY	28,442.29	22,980.00				51,422.29	92,580.00	22,580.00			92,580.00	4,909.03
HARFORD COUNTY	5,038.68	59,334.64		77,311.50		132,284.82	132,284.82	137,285.79			137,285.79	4,909.03
KENT COUNTY	42,290.52		12,290.52			54,581.04	35,710.00	45,917.97			45,917.97	20,297.97
MONTGOMERY COUNTY			23,710.00			23,710.00	12,713.84	81,669.38			81,669.38	69,577.54
PRINCE GEORGE'S COUNTY	32,965.70	40,950.00				73,915.70	80,019.54	60,433.64			60,433.64	26,368.34
QUEEN ANNE'S COUNTY	3,198.22		77,065.76			80,263.98	18,271.00	7,741.00			18,271.00	80,133.80
ST. MARY'S COUNTY			81,043.75			81,043.75	91,353.80	3,692.00			91,353.80	11,132.00
SOMERSET COUNTY							9,590.00	9,590.00			9,590.00	3,236.26
WASHINGTON COUNTY	6,999.39					6,999.39	6,999.39	3,763.04			3,763.04	3,236.26
WICOMICO COUNTY												
WORCESTER COUNTY												
TOTAL	<i>\$ 49,836.66</i>	\$ 562,109.53	\$ 252,103.11	\$ 77,471.46	\$ 28,282.54	\$ 919,966.64	\$870,130.58	\$678,871.10	\$222,857.95	\$ 234.01	\$901,966.06	\$ 31,833.48

Italics indicate red figures.

SINKING FUNDS

STATEMENT OF REVENUES AND EXPENDITURES FOR THE FISCAL YEAR
ENDED JUNE 30, 1957

	TOTAL	STATE HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS		COUNTY HIGHWAY CONSTRUCTION BONDS, SINKING FUNDS		
		SERIES A,C,D, AND E	SECOND ISSUE SERIES F,G,H, I, AND J	FIRST SERIES	SECOND SERIES	THIRD SERIES
REVENUES:						
Portion of proceeds of 50% share of the Gasoline Tax Fund	\$8,897,267.00	\$1,842,635.02	\$1,051,631.98			
Portion of proceeds of 20% share of the Gasoline Tax Fund	316,545.56			\$ 110,625.00	\$ 127,805.00	\$ 108,115.56
Portion of proceeds of 20% share of Motor Vehicle Revenue Fund	38,879.64					38,879.64
Portion of proceeds of excise tax on certificates of title to motor vehicles	2,567,279.32	2,262,245.16	305,034.16			
Premium and accrued interest on bonds sold:						
State Highway Construction Bonds:						
Series I, par value \$15,000,000	8,040.00		8,040.00			
Series J, par value \$15,000,000	10,759.58		10,759.58			
County Highway Construction Bonds, Third Series, par value \$1,567,000	1,661.05					1,661.05
Net income from United States Treasury obligations	306,070.97	201,542.31	98,420.28	2,988.95	1,871.09	1,248.34
TOTAL REVENUES	\$12,176,503.12	\$7,306,422.49	\$1,476,886.00	\$ 113,613.95	\$ 129,676.09	\$ 149,904.59
EXPENDITURES:						
Funds deposited with paying agent for debt service:						
State Highway Construction Bonds:						
Series A, due August 1, 1956	\$1,500,000.00	\$1,500,000.00				
Series C, due December 1, 1956	1,667,000.00	1,667,000.00				
Series D, due December 1, 1956	1,666,000.00	1,666,000.00				
Series E, due August 1, 1956	1,666,000.00	1,666,000.00				
Series F, due September 1, 1956	400,000.00		400,000.00			
Series G, due July 1, 1957	400,000.00		400,000.00			
Series H, due November 1, 1956	300,000.00		300,000.00			
Interest on all bonds	3,261,824.33	1,216,377.33	2,048,447.00			
County Highway Construction Bonds:						
First Series, due July 1, 1957	80,000.00			\$ 80,000.00		
Second Series, due August 1, 1957	20,000.00			\$ 20,000.00		
Interest on all bonds	89,311.25			25,625.00	\$ 11,555.00	\$ 22,131.25
TOTAL EXPENDITURES	\$ 11,053,135.58	\$7,715,377.33	\$3,148,417.00	\$ 105,625.00	\$ 61,555.00	\$ 22,131.25
EXCESS OF REVENUES OVER EXPENDITURES (Excess of expenditures in italics)	\$1,123,367.54	\$ 408,954.84	\$1,328,439.00	\$ 7,988.95	\$ 68,121.09	\$ 127,773.34
CASH BALANCE, JULY 1, 1956—Including investment in United States Treasury obligations	10,403,657.97	8,197,732.61	1,965,134.28	118,335.43	122,455.65	
CASH BALANCE, JUNE 30, 1957—Including investment in United States Treasury obligations	\$11,527,025.51	\$7,788,777.77	\$3,293,573.28	\$ 126,324.38	\$ 190,576.74	\$ 127,773.34

NOTE—The revenues and expenditures shown by this statement do not include the purchase, sale, or redemption of investment securities consisting of United States Treasury obligations. For purposes of this statement, United States Treasury obligations owned at July 1, 1956, and at June 30, 1957, are considered as the equivalent of cash.

EXHIBIT F, Schedule 5

GENERAL CONSTRUCTION AND OPERATING FUND, AND MAINTENANCE FUND
STATEMENT OF PARTICIPATION IN COSTS BY POLITICAL SUBDIVISIONS AND OTHERS FOR THE
FISCAL YEAR ENDED JUNE 30, 1957

PROJECT NUMBER	RECEIVED FROM	DESCRIPTION	GENERAL CONSTRUCTION AND OPERATING FUND		MAINTENANCE FUND
			PROGRAM PRIOR TO JULY 1, 1954	TWELVE-MONTH PROGRAM	
A 140 1	State Roads Commission of West Virginia	Structural steel superstructure for bridge over Potomac River between Cumberland, Maryland, and Rudeky, West Virginia	\$ 195,131.39		
A 148	Mayor and Commissioner of Cumberland	Construction of concrete curbing and storm water sewers along Frederick Street in Cumberland	17,780.06		
AA 512X	Individual	Signal system controlling the entrance to the Ritchie Highway Shopping Center at the intersection of Md. 2 and Md. 171	800.00		
B 578 8		Refund of amount previously received from individuals for relinquishing the right of an access road on the Harpersburg Expressway in the vicinity of the Bonnie Blinn Masonic Home	1,000.00		
B 635 4	Department of Public Works, Baltimore County	Construction of curb and gutter along U. S. 111 from Washington Avenue to Sandy Bottom	27,595.03		
B 635 51	Department of Public Works, Baltimore County	Material in connection with installation of water main at west end of Hodkins Ferry bridge		\$ 340.00	
B 637 2	County Commissioners of Baltimore County	Improvement and channelization at the intersection of Bloomsbury Avenue and Rolling Road	62,611.20		
B 703X	Baltimore County Police Department	Installation of full-actuated traffic signal at the intersection of Md. 151 and Baltimore Street	2,292.94		
B 704X	Baltimore County Police Department	Installation of 3 phase full-actuated traffic signal at the intersection of Golden Ring Road and Kenwood Avenue	2,438.95		
CL 336-2	County Commissioners of Carroll County and County Commissioners of Frederick County	Construction of bridge over Little Pipe Creek at Md. 71, south of Keymar Decking, etc. on the Deanswick Bridge	15,413.38	12,205.92	
F 517 2	State Roads Commission of Virginia	Construction of a section of Jefferson Street	20,000.00		
F 507 5	City of Frederick	Relocation and construction of Md. 73, construction of connecting road between relocated Md. 73 and Yellow Springs Road, improvement to 40 Street extended, and construction of deceleration lanes in the vicinity of Port Detrick			
F 578 1	U. S. District Court	Concrete substructure and approaches for bridge over Potomac River between Kitzmiller, Maryland, and Blaine, West Virginia		137,570.61	
G 251-4	State Roads Commission of West Virginia			111,650.33	

II 391-2	Commissioners of Bel Air	Material in connection with construction of curb and gutter on Md 524 from Bel Air to Forest Hill	10,575.00	
K 297	Maryland State Game and Inland Fish Commission	Construction of a dam at the Urickville Mill Pond Revenue transferred from General Construction and Operating Fund Program Prior to July 1, 1951 to the Twelve-Year Program in the fiscal year 1957	37,915.99	
M 485-10	Baltimore and Ohio Railroad Company	Construction at Washington National Pike, Baltimore and Ohio Railroad and relocated Brown Station Road Revenue transferred from General Construction and Operating Fund Program Prior to July 1, 1951 to the Twelve-Year Program in the fiscal year 1957	10,000.00 3,820.00	10,000.00 3,820.00
M 526-1	Community Builders, Inc.	Modification of storm water drainage facilities at Viers Mill Village		1,921.69
M 547X	County Commissioners of Montgomery County	Installation of a semi-actuated traffic signal at the intersection of Md. 97 and Aroha Avenue		961.56
M 549X	County Commissioners of Montgomery County	Installation of semi-actuated traffic signal at the intersection of U. S. 249 and Md. 547		1,331.86
M 555X	County Commissioners of Montgomery County	Installation of full-actuated traffic signal at the intersection of Md. 391 and Md. 591		5,000.00
P 695-1	U. S. Army Corp of Engineer, Washington District	Removal of existing Baltimore Avenue bridge		26,533.85
P 695-3	U. S. Army Corp of Engineer, Washington District	Construction of bridge over Northwest Branch, Anacostia River near Hyattsville		39,000.00
P 721-2	University of Maryland, College Park, Maryland	Installation of large culvert on campus ground		9,500.00
P 750-1	Baltimore and Ohio Railroad	Construction of bridge over Baltimore and Ohio Railroad in Brentwood, Maryland		3,290.71
P 780X	County Commissioners of Prince George County	Installation of 3 phase full-actuated traffic signal at the intersection of Md. 210 and Andrew Lane		1,296.02
P 781X	County Commissioners of Prince George County	Installation of semi-actuated traffic signal at the intersection of Md. 411 and Livingston Road		2,861.37
P 782X	County Commissioners of Prince George County	Installation of 3 phase full-actuated traffic signal at the intersection of Md. 210 and Old Livingston Road		2,675.05
P 784X	County Commissioners of Prince George County	Installation of 2 phase full-actuated traffic signal at the intersection of Md. 4 and 48th Avenue		2,243.51
P 789X	Town of Bladensburg, Inc., and County Commissioners of Prince George County	Installation of full-actuated traffic signal at the intersection of U. S. 50 and 56th Street in Bladensburg		1,400.00
P 796X	Mayor and City Council of Laurel	Construction of crossover opposite Mountrose Avenue on U. S. 1		4,361.62
SM 301	Town Commissioners of Leonardtown	Construction of curb and gutter on Lawrence Street in Leonardtown		200,000.00
W 128-1	Mayor and Council of Hagerstown	Construction of bridges on relocation of Pennsylvania Railroad and Western Maryland Railway over Church and Franklin Streets in Hagerstown		269,101.00
W 128-5	Mayor and Council of Salisbury	Construction of the East-West Parkway in Salisbury		\$ 2,000.00
WI 292-2	Marlow Heights Land Corporation	Engineering and right-of-way services for cost of lowering 2 wells		1,000.00
---	La Vale Sanitary Commission	Construction of water line to serve the new district office in Cumberland, Maryland		
TOTAL			\$579,706.76	\$922,377.36
				\$3,000.00

Italics indicate red figures.

EXHIBIT G

COMBINED STATEMENT OF EXPENDITURES, BY FUNDS AND BY DIVISIONS, FOR THE FISCAL YEAR ENDED JUNE 30, 1957
(INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	GENERAL CONSTRUCTION AND OPERATING FUND				COUNTIES AND MUNICIPALITIES TAX REVENUES AND ALLOTMENT FUND			COUNTY MAINTENANCE FUND	COUNTY CONSTRUCTION FUND	STAKING FUNDS
	ADMINISTRATIVE AND GENERAL EXPENSES (Schedule 1)	REPAIRS	EQUIPMENT SERVICE COSTS (Schedule 2)	GENERAL	GENERAL CONSTRUCTION	MAINTENANCE FUND	MUNICIPAL TAX REVENUES AND ALLOTMENT FUND			
TOTAL	\$ 70,010.58	\$ 71,730.21	\$ 108.97	\$ 6,767.09	\$ 728.58	\$ 7,312.79		\$ 602.85		
Maintenance	698,781.98	82,130.73	1,101.76	652.01	11,081.90	20,066.16				
Special Operations	271,251.01	228,361.27	112.50	278.78	2,081.01	291.23				
Commission Administration	47,171.06	11,917.52	1,653.30							
Commission Public Relations	370,041.80	365,988.50	376.09							
Accounting - Chief	168,572.10	166,715.61	1,680.61		1,450.40	660.02				
Engineering	628,326.28	312,732.35	682.01	93.10	309,353.99	9,186.91			899.31	
Road Design	181,631.63	201,369.91	351.67	31,622.86	260,663.31	16,100.91			9,611.73	
Bridge Design	119,635.63	41,015.79	4,292.01	23.28	220,211.21	679.15			2,918.73	
Sign Shop (Baltimore)	432,025.87	223,823.50	19.00							
Soils and Materials	85,295.16	55,246.16	2,010.61	1,851.69	255.61	92.16				
Legal	51,676.52	47,463.45	36.70	1,691.76	1,153,022.57	1,197.09			3,537.43	
Repair Shop (Baltimore)	1,878,228.59	399,770.08	512.06		390,783.61	5,075.82			21.31	
Construction Inspection	748,295.01	351,902.18	60.20							
Right-of-Way	128,538.87	128,478.67	8,826.66							
Personnel	73,026.52	236,130.33	1,626.00							
Main Office Building Service	81,863.18									
Highway Location and Survey	881,599.12				611,176.36	500.55			1,775.88	
Williamsport Toll Bridge	51,711.28									
Engineering Handling Permits	2,1063.20			21,063.20	19,966.12	51,711.28				
Traffic - General	338,962.31		3.518.55	8,058.79	17.52	7,798.75				
Traffic - Control Surveys and Maps	28,873.32	28,617.36	135.81	72.60						
Traffic - Truck Weight-and-Size Enforcement	268,225.82			268,215.12	10.40					
Engineering - Special Services	19,066.98	43,382.38	13.90		5.610.70					
Engineering - General Office	129,297.26	117,659.05	362.53							
TOTAL	\$8,029,947.39	\$3,550,405.10	\$ 30,843.04	\$ 342,741.57	\$3,851,109.48	\$ 162,568.86	\$ 3,676.36	\$ 31,535.77		

DISTRICT DIVISIONS:										
District No. 1	\$1073,675.12	\$ 178,638.07	\$ 1,399.03	\$ 101,626.77	\$ 6,224.95	\$ 45,742.91	\$ 526,139.42	\$ 208,717.60	\$ 4,886.37	
District No. 2	2,347,839.84	297,761.15	6,167.08	311,991.29	11,558.22	49,149.85	834,771.78	453,080.32	80,360.15	
District No. 3	1,408,360.71	287,640.25	8,833.35	142,078.18	10,399.11	158,747.55	859,831.30		630.97	
District No. 4	1,240,262.76	246,159.97	4,096.39	126,252.26	819.69	61,064.13	801,870.32			
District No. 5	2,376,794.83	352,349.81	14,933.08	244,083.74	16,098.27	77,234.18	1,010,434.01			
District No. 6	992,281.47	242,567.04	4,537.46	114,390.40	151.67	21,459.95	577,584.13		58,158.83	
District No. 7	1,041,286.79	236,494.88	10,358.47	142,260.58	636.09	17,333.51	634,203.26		1,600.82	
TOTAL	\$10,710,591.52	\$1,841,601.17	\$ 59,324.86	\$1,185,683.22	\$ 46,088.00	\$ 430,732.38	\$5,245,134.22		\$ 145,637.44	
TOTAL GENERAL AND DISTRICT DIVISIONS:										
NON-DEPARTMENTAL	\$18,740,448.91	\$5,392,006.27	\$ 81,167.90	\$1,239,750.43	\$ 388,829.57	\$4,281,841.86	\$5,407,703.08	\$1,768,976.89	\$ 180,172.91	
	75,153,197.35				390,969.11	50,611,055.52	791,555.64	277,984.17	1,298,763.83	\$11,053,135.58
TOTAL (before Fund distribution of administrative and general expenses, and equipment service costs)										
Appropriation of:	\$63,893,546.26	\$5,392,006.27	\$ 81,167.90	\$1,239,750.43	\$ 779,798.68	\$54,892,897.38	\$6,199,258.72	\$2,046,061.06	\$147,849.64	
Administrative and general expenses										
Equipment service costs		5,392,006.27								
			82,924.06		10,286.56	4,195,642.40	1,074,941.51	152,718.73	42,465.87	
		1,124.74	1,756.16	1,239,750.43	9,105.83	76,916.69	904,506.17	239,981.40	6,269.44	
TOTAL EXPENDITURES	\$63,893,646.26				\$ 799,191.07	\$59,165,456.47	\$8,178,796.40	\$10,730,633.50	\$2,438,761.19	\$11,527,672.05
										\$11,053,135.58

NOTE—This statement does not include:
 Cost of United States Treasury obligations purchased \$76,045,669.33
 Remittances of collections to State Treasurer:
 Sign licenses—General Fund \$ 3,079.16
 Hauling permits—Motor Vehicle Revenue Fund

Italics indicate red figures.

EXHIBIT G, Schedule 1

STATEMENT OF ADMINISTRATIVE AND GENERAL EXPENSES
FOR THE FISCAL YEAR ENDED JUNE 30, 1957

	TOTAL	SALARIES AND WAGES	PAY FOR VACATION, SICK AND OTHER LEAVE	PENSION CONTRIBU- TIONS AND SOCIAL SECURITY CONTRIBU- TIONS	PASSENGER CAR COSTS	TELEPHONE, TELEGRAPH, AND POSTAGE	TRAVELING EXPENSES	RENTAL OF LAND, BUILDINGS, AND EQUIPMENT	SUPPLIES— OFFICE, LABORATORY, ETC.	PRINTING, PHOTODUPLICATION, BLUE PRINTS, ETC.	LIGHT, HEAT, POWER, AND WATER	Misc- CELLARIES AND WAGES	REPAIRS			
													SALARIES AND WAGES	MATERIALS, CENTRAL SER- VICES, ETC.		
General Divisions:																
Manufacture	\$ 71,870.21	\$ 66,205.72	\$ 8,974.68	\$ 4,423.27	\$ 3,322.18	\$ 2,240.72	\$ 1,395.00	\$ 1,856.00	\$ 2,576.43	\$ 10.25	\$ 511.58	\$ 715.50	\$ 108.97			
Special Operations	83,832.49	36,630.30	15,032.12	8,020.86	10,472.40	3,671.39	1,411.22	1,967.36	2,098.54	41.62		2,233.41	954.15			
Commission—Adminis- tration	228,996.28	93,425.13	8,082.27	7,107.39	7,923.91	7,998.32	5,000.29	6,233.00	1,980.32	33,250.14		57,280.60	632.01			
Commission—Public Relations	45,000.02	11,892.61	950.87	748.97	1,653.06	1,698.53	3,010.89		3,572.27	9,843.04		11,577.18	142.50			
Accounting	370,041.80	202,657.84	42,594.16	20,802.45	1,411.31	6,283.80	678.37	8,779.82	13,408.85	22.30	4,406.21	2,937.00	4,053.30			
Engineering—Chief	107,121.70	112,877.76	14,633.19	9,000.33	4,882.33	3,279.25	3,684.20	13.15	2,802.36	57.01		9,513.43	273.00			
Road Design	314,412.96	135,833.34	71,190.22	31,378.14	4,187.22	3,252.77	2,867.80	30,000.00	21,108.08	2,184.65	1,002.03	6,412.10	1,684.01			
Bridge Design	202,042.95	85,661.30	49,151.44	23,157.70	1,563.48	3,727.13	2,569.61	10,401.20	4,158.10	7,582.88	10,759	2,117.48	982.01			
Sign Shop (Baltimore)	41,367.46	17,309.80	12,563.35	6,434.27	1,491.35	1,171.91	1,332.20		815.35	252.00		10.45	351.67			
Sign Shop (Baltimore)	228,024.54	104,183.75	42,461.56	20,670.27	16,465.84	4,044.72	3,336.48	8.95	20,373.16	16.00	5,185.34	6,107.43	4,202.94			
Legal	85,295.16	60,372.02	1,330.67	4,135.29	3,607.21	1,140.78	4,381.00		1,395.24	1,315.20	2,039.20	396.39	49.00			
Legal	49,474.06	27,997.49	8,181.94	3,483.12	2,791.60	634.35	31.90		734.16				849.62			
Construction Inspection	396,896.78	52,642.98	227,468.38	100,969.13	12,017.36	750.28	1,667.80	2,665.50	1,637.08	11.51	730.94	12,359.86	367.70			
Right-of-Way	352,414.24	146,878.43	81,062.28	38,590.10	42,509.53	13,160.12	2,964.52		18,382.88	1,018.52		80,259.76	500.82			
Personnel	128,638.87	30,241.23	3,639.42	2,265.42	1,898.79	1,826.24	182.50	2,667.24	815.19	5.85			11.24			
Main Office Building	81,853.18	45,723.15	4,022.64	2,874.23		178.72	1.95	292.00	3,531.76		11,739.68	4,999.39	8,826.66			
Service	288,056.33	66,553.01	87,489.85	39,792.40	21,310.65	3,939.47	1,765.90	7.00	9,631.96	620.78		2,619.31	1,926.00			
Highway Location and Survey	366,138.75	102,498.02	37,446.21	15,558.79	8,394.18	3,573.66	9,986.06	11,751.24	5,092.39	17,286.95		796.30	3,548.55			
Traffic—General	28,753.20	18,457.86	3,256.25	1,234.00	712.61	351.47	4,181.02		44.28			349.87	136.84			
Traffic—Control, Sur- veys and Maps	13,426.28	34,222.66	3,371.39	2,443.47	757.69	331.71	665.80	13.35	185.18			1,391.13	43.90			
Engineering—Special Services	118,024.58	83,107.10	13,198.99	6,891.54	2,166.54	1,567.54	1,094.76	280.80	3,697.63	3,557.92		2,096.23	362.53			
Engineering—General Office																
TOTAL.....	\$3,581,248.14	\$1,650,622.10	\$ 753,438.15	\$380,139.44	\$154,250.62	\$ 71,458.52	\$ 62,339.02	\$ 82,900.61	\$120,444.81	\$ 77,049.22	\$ 31,269.68	\$ 217,492.90	\$ 1,619.84	\$ 29,223.20		

DISTRICT DIVISIONS:																			
District No. 1	\$ 180,037.10	\$ 78,172.12	\$ 54,651.77	\$ 25,360.57	\$ 9,183.89	\$ 5,411.22	\$ 2,153.29	\$ 949.55	\$ 1,710.73	\$ 17.37	\$ 877.75	\$ 140.81	\$ 2,004.49	\$ 1,180.54					
District No. 2	303,928.23	118,465.84	104,546.74	48,032.31	11,607.67	8,303.44	1,431.23	2,000.40	2,408.25	76.01	272.68	616.58	2,104.54	4,062.54					
District No. 3	266,473.60	100,227.45	117,140.23	45,450.15	8,292.36	10,907.11	1,516.26	90	3,067.49	4.18	758.96	115.26	5,115.20	3,717.96					
District No. 4	250,576.36	81,568.97	96,020.28	43,128.07	8,805.07	6,430.71	2,119.59	2,903.08	1,466.93	36.15	549.03	71.99	2,043.21	2,053.18					
District No. 5	337,282.89	118,240.66	141,931.96	65,773.98	11,673.25	9,437.77	1,709.72	1,269.60	2,121.66	1.05	56.19	19.17	10,952.66	3,980.12					
District No. 6	217,004.50	86,540.09	80,872.19	41,307.17	11,228.83	8,726.63	831.98	903.00	2,411.07	110.78	459.23	175.05	3,772.66	704.80					
District No. 7	246,853.35	81,597.23	94,691.31	43,163.91	7,071.09	6,233.59	1,003.01	1,488.00	1,457.27	20.80	92.27	166.40	6,964.93	3,396.51					
TOTAL	\$1,891,926.03	\$ 667,752.36	\$ 698,851.58	\$312,227.16	\$ 67,962.16	\$ 55,530.19	\$ 10,758.08	\$ 9,114.53	\$ 14,673.40	\$ 266.34	\$ 3,057.11	\$ 1,405.26	\$ 31,160.18	\$ 19,164.68					
TOTAL	\$5,473,174.17	\$2,327,374.46	\$1,632,292.76	\$662,268.60	\$222,212.78	\$126,988.71	\$ 63,097.10	\$ 92,015.14	\$135,118.21	\$ 77,315.56	\$ 34,326.79	\$218,898.16	\$ 32,780.92	\$ 48,387.88					

Note—Amounts in excess of \$10,000.00 included in this statement under "Miscellaneous" are analyzed as follows:

GENERAL DIVISIONS	TOTAL	WORKMEN'S			
		COMPENSATION AND MEDICAL SERVICES	OTHER INSURANCE	PROFESSIONAL AND TECHNICAL SERVICES	OTHER
COMMISSION—ADMINISTRATION	\$ 57,280.60		\$ 31,261.06	\$ 16,400.76	\$ 9,618.78
COMMISSION—PUBLIC RELATIONS	11,577.18			1,753.30	3,823.28
RIGHT-OF-WAY	12,353.86			9,947.66	2,412.21
PERSONNEL	86,238.76	\$ 84,711.31			1,527.45

EXHIBIT G, Schedule 2

**STATEMENT OF OPERATING EQUIPMENT EXPENSES FOR THE
FISCAL YEAR ENDED JUNE 30, 1957**

	TOTAL	DISTRICT							STATE WIDE
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	
Salaries and Wages	\$ 474,005.42	\$ 39,221.70	\$102,858.26	\$ 59,037.19	\$ 57,909.87	\$ 84,344.23	\$ 45,714.88	\$ 67,086.67	\$ 17,832.62
Insurance	12,700.16	1,061.02	2,622.84	1,476.52	1,351.08	2,254.80	1,590.64	1,494.77	848.49
Light, Heat, Power, and Water	32,378.11	2,834.29	7,505.02	3,210.25	4,291.73	4,779.19	4,381.73	4,713.85	662.05
Traveling Expenses	979.25	44.80	279.41	142.55	149.65	196.45	130.38	36.01	36.01
Fuel Oil—Diesel	19,351.21	1,912.99	8,478.21	1,411.26	644.75	3,497.18	535.01	1,108.17	1,763.64
Gasoline	221,161.29	15,235.75	55,142.21	23,879.29	22,003.79	49,641.05	27,378.67	22,058.60	5,821.93
Kerosene	9,175.75	672.88	2,593.14	832.14	1,060.64	1,884.34	966.36	1,072.49	93.76
Lubricating Oil	11,234.03	903.66	3,384.29	1,026.83	689.24	2,389.14	1,124.81	1,084.57	631.49
Parts and Repairs	325,108.65	28,950.73	103,242.31	32,482.73	25,542.67	64,412.49	20,893.09	26,497.24	23,087.39
Shop Materials and Supplies	55,361.72	4,644.11	11,528.79	8,257.55	4,424.05	11,875.13	5,158.36	7,843.56	1,630.17
Tires and Tubes	71,354.58	5,942.88	16,088.87	9,675.49	7,404.10	17,313.51	6,041.94	7,386.60	1,501.19
Miscellaneous Expenses	6,940.26	201.96	1,267.94	646.38	780.69	1,496.23	604.91	1,783.68	158.47
TOTAL	\$ 1,239,750.43	\$101,626.77	\$314,991.29	\$142,078.18	\$126,252.26	\$244,083.74	\$114,390.40	\$142,260.58	\$ 54,067.21

EXHIBIT H

COMBINED STATEMENT OF EXPENDITURES, BY OBJECTIVE CLASSIFICATION, FOR THE FISCAL YEAR ENDED JUNE 30, 1957
(INCLUDING ALL FUNDS EXCEPT FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS)

	GENERAL CONSTRUCTION AND OPERATING FUND				COUNTIES AND MUNICIPALITIES TAX REVENUES ALLOCATION FUND	COUNTY MAINTENANCE FUNDS	COUNTY CONSTRUCTION FUNDS	SINKING FUNDS
	ADMINISTRATIVE AND GENERAL EXPENSES	REPAIRS	EQUIPMENT SERVICE COSTS	GENERAL				
SALARIES, WAGES, AND EMPLOYERS' EXPENSES:								
Staff salaries	\$2,061,569.33	\$ 12.08	\$ 32,005.12	\$ 163,848.19	\$ 2,875,227.29	\$ 89,150.33	\$ 31,300.64	
General salaries	97,787.20	15,079.51	3,127,948.61	17,965.80	92,063.12	1,180,091.38	22,062.52	
Hourly roll	2,787,946.31	17,058.13	99,201.39	101,345.41	109,259,048	1,878,211.79	17,092.31	
Sick leave	337,920.81			1,813.10		185.43		
Vacation leave	534,412.12			8,731.70		38,710.89		
Military leave	12,561.06			163.28		259.21		
Holiday, jury, and other leave	683,981.53			12,931.18		71.66		
Medical services	5,267.00					2,296.52		
Workmen's compensation insurance	95,817.60			8,114.66		2,165.00		
Pension contributions	196,778.33			17,803.39		36,615.61		
Social security contributions	235,156.70					7,183.36		
MATERIALS AND SUPPLIES:								
Additive with bituminous material	734.47			5.26	9.57	719.64		
Aggregates—graded stone, slag, gravel, sand, and screenings	596,703.39	522.15		2,827.87	11,338.16	32,1212.91	15,837.53	
Aggregates—ungraded bank run gravel and sand, oyster shells, and crusher run stone and slag		313.11	11.22	3,240.84	56,073.97	5,515.48	37,710.07	3,031.50
Bituminous materials		105.27		3,396.19	6,412.95	156,997.61	39,742.76	
Brick	770.87				190.83	371.39	8.65	
Cable	1,917.37		585.19		174.85	211.30	899.01	
Calcium chloride (salt)	95,042.22		60.77	264.91	1,743.90	90,377.78	2,594.83	
Cement	5,356.27			77.92	1,265.81	2,867.76	7,004.98	1.45
Coinders	85,239.61				11.00	85,228.61		
Concrete	26,895.01				11,439.61	10,590.32		
Diesel or fuel oil	24,329.14		19,351.21	1,538.19	928.78	1,703.09	3,727.37	
Gasoline	27,496.81		22,161.29	11.00	1,703.09	80.00	2,600.81	
Grader blades and chains	27,486.78		29,007.65		39.18	18,866.86	18,866.86	
Heat for buildings	60,470.19		18,049.87	520.00	19,159.16	49,197.73	1,697.58	
Highway beautification				18.51	555.62	3,012.39	888.30	1.56
Kerosene	13,637.16		9,175.75			1.38		
Laboratory supplies	16,332.46					4.08	992.46	
Lubricating oil	12,216.81		11,234.03	.40		75.87	21,831.31	
Lumber	57,289.45		1,392.10	4,744.35	10,127.19	16,110.57		61.62
Office building service supplies	5,315.35					2.50		
Office supplies	101,073.31			1,116.67	2,409.99	105,139.25	317.00	
Paint	115,182.54		2,546.61	2,368.63		105,926.40	10,028.07	
Parts for motor vehicle repairs	213,784.08		292,784.61	45.00		301.50		
Parts for other repairs	38,636.27		31,590.33	32.64	191.77		1,395.88	

Pipe and pipe bands	133,523.47	96.09	232.11	96.59	989.39	40,988.27	25,850.03	62,774.00	2,496.99
Posts and guard rails	64,019.81		46.91		118.62	5,575.46	56,898.12	1,287.68	93.02
Pre-mixed bituminous materials	281,990.43				8,593.69	82,590.95	177,608.26	13,158.30	39.20
Scotchlite for signs	78,975.32				78,965.58		9.74		
Shop supplies	53,328.44	1,046.36	214.83	48,861.03	296.50	237.12	1,327.19	1,345.41	134.19
Small tools, other than shop tools	39,186.78	8,244.77	234.08		129.50	4,220.25	22,254.43	3,868.06	
Snow plow blades and parts	12,266.65						12,266.65		
Steel and iron	76,700.82				24,525.59	43,834.98	5,074.34	829.42	
Tires and tubes	80,407.81				1,808.18	139.62	1,303.98	7,749.25	
Wire	2,505.48	1.47	29.08	71,354.58	1,450		1,871.65	449.16	
Miscellaneous	123,787.42	3,606.94	1,781.76	6,334.89	9,852.76	70,610.10	29,726.40	1,870.88	3.69
GENERAL OPERATING EXPENSES:									
Advertising	16,779.39	8.00			327.85	15,421.08	419.61		692.85
Books and subscriptions	3,994.01	3,994.01			3,513.36	32,685.39	178,528.88	219,230.62	51,735.08
Contractual costs—oiling									
Dues	2,346.45	2,346.45				1,011.75	1,237.54		
Insurance	46,205.82	31,253.37			795.50		10.60		
Laundry service	2,303.12	1,019.33			477.69				
Light, power, and water	107,851.57	27,053.53			1,349.30	662.32	64,453.18		
Office cleaning service	1,386.70	1,386.70							
Office mail allowance	25,182.23	17,779.50				7,080.25	125.23		40.50
Passenger car costs	234,312.50	222,212.78			11,206.67	3,569.87	833.05		5.68
Photostats, blue prints, and films	13,001.71	9,410.96				88.11	638.27	3,557.48	
Printing	68,940.50	67,904.90			143.65	115,282.24	85,280.89	185.81	63.34
Prison labor	204,520.36	162.80				19,384.56	5,048.13		
Professional and technical services	89,075.56	55,188.72			30.00				
Rental of automotive equipment for hauling materials	272,435.74	90.00	38.75		324.00	109,002.29	71,653.34	89,071.86	1,955.50
Rental of automotive equipment for direct road work	265,124.05				1,148.40	94,655.03	131,272.22	38,017.50	
Rental of land and buildings	83,637.67	84,078.67				10.00	605.50	943.59	
Rental of office equipment	7,871.37	7,816.47					24.90		
Repair services (purchased) other than passenger cars	114,915.71	1,310.80	33,248.46	70,726.06	4,653.62	3,356.27	29,488.16	11,128.84	1.50
Signs and markers (includes manufacturing cost of signs and markers without cost of stock)	157,530.69	457.44			1,038.24	33,580.65	121,308.86	637.56	507.84
Telephone, telegraph, and postage	140,785.78	126,988.71			2,698.20	9,890.45	1,077.45		259.97
Training expenses	453,284.66	63,007.10			979.25	359,970.32	12,866.70	489.86	2,865.79
Miscellaneous	23,683.26	18,804.30			50.00	2,795.26	3,918.35		17.64
Other Expenditures:									
Contraction of contract payments	33,090,007.15					32,499,959.26	155,314.44		413,823.75
Land purchased (right-of-way)	13,918,661.64				699.00	13,915,563.70	1,868.94		500.00
Professional services	3,298,669.18				10,693.83	3,282,314.47	2,820.80		2,840.08
Relocating power lines, etc., upon acquisition of right-of-way	531,319.24					528,336.22	180.97		2,802.05
Purchases of fixed assets (exclusive of overhead and equipment service costs)	628,593.71				7,399.43		612,891.28		
Net increase in book value of inventories of materials and supplies (after deducting salaries and wages, and equipment service costs, etc., totaling \$47,350.57).	212,665.49				212,665.49				

Payment to Accounting Officer, District of Columbia—Washington Metropolitan Area Transportation Study.....	18,790.09									
Payment to Washington Suburban Sanitary Commission for special assessment.....	5,955.20									
Installation of fence at Spring Grove.....	3,235.00									
Repairs to buildings, etc.....	32,608.38					26,604.98				
Relocation of traffic signals.....	41,395.85					3,012.85				
Board of Property Review—general expenses.....	57,761.17					11,070.65				
Inter-Fund transfer.....	10,602.07					19.43			639.58	
Miscellaneous.....										
TOTAL (before Fund distribution of administrative and general expenses, and equipment service costs).....	\$93,893,646.26	\$5,392,006.27	\$1,167.90	\$1,239,750.43	\$779,798.68	\$6,199,258.72	\$10,730,633.50	\$2,046,061.06	\$1,478,936.74	\$11,053,135.58
APPLICATION OF:										
Administrative and general expenses.....		5,393,131.01	82,424.06		10,286.56	4,195,612.40	1,074,941.51	152,718.73	42,465.87	
Equipment service costs.....		1,124.74	1,756.16	1,239,750.43	9,105.83	76,916.59	904,596.17	239,981.40	6,269.44	
TOTAL EXPENDITURES.....	\$93,893,646.26				\$799,191.07	\$69,165,456.47	\$8,178,796.40	\$2,438,761.19	\$1,527,672.05	\$11,053,135.58

Note—This statement does not include:

Cost of United States Treasury obligations purchased.....	\$76,045,699.33
Remittances of collections to State Treasurer.....	3,079.16
Sign licenses—General Fund.....	\$206,880.00
Hauling permits—Motor Vehicle Revenue Fund.....	

Italics indicate red figures.

EXHIBIT I

**STATEMENT OF TRAFFIC VOLUME AND TOLL INCOME OF WILLIAMSPORT TOLL
BRIDGE, BY CLASSIFICATIONS, FOR THE FISCAL YEARS ENDED
JUNE 30, 1957 AND 1958**

	TOLL RATE	FISCAL YEAR ENDED JUNE 30, 1957		NINE MONTHS ENDED MARCH 31, 1958*	
		TRAFFIC VOLUME	TOLL INCOME	TRAFFIC VOLUME	TOLL INCOME
Passenger Cars and Light Commercial Vehicles:					
Passenger cars, taxicabs, ambulances, motorcycles, etc.	\$.10	1,042,580	\$ 104,258.00	762,092	\$ 76,209.20
Passenger vehicles with one-axle trailer	.15	6,016	902.40	4,413	661.95
Official duty vehicles		1,046		685	
Heavy Commercial Vehicles:					
Trucks and tractors (2-axes)	.25	77,556	19,389.00	59,685	14,921.25
Trucks and tractors, tractors and semi-trailers (3-axes)	.75	26,749	20,061.75	22,635	16,976.25
Tractors and trailers (4-axes)	1.00	135,799	135,799.00	83,649	83,649.00
Unusual vehicles and vehicles with 5 or more axes	1.25	341	426.25	281	351.25
Buses	.35	3,869	1,354.15	2,620	917.00
TOTAL		1,293,956	\$ 282,190.55	936,051	\$ 193,676.90
Collections in Excess of Calculated Tolls, Etc.—Net			622.16		456.80
TOTAL INCOME			\$ 282,812.71		\$ 194,133.70

* Bridge became toll-free April 1, 1958.

EXHIBIT J

STATEMENT OF FEDERAL AID ACCOUNTS FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

	APPORTIONMENTS		RECEIPTS		BALANCE, JUNE 30, 1958			TOTAL
	BALANCE, JULY 1, 1956 (APPORTIONMENTS THROUGH 1957)		(SCHEDULE 1) FISCAL YEAR ENDED		(SCHEDULE 1) UNDER PROJECT AGREEMENT		AVAILABLE FOR PROJECT AGREEMENTS	
	1958	1959	JUNE 30, 1957		JUNE 30, 1958			
			JUNE 30, 1957	JUNE 30, 1958	EARNED UNCOLLECTED	UNEARNED		
Postwar Primary	\$8,717,306.92	\$3,626,624.00	\$2,452,374.47	\$3,854,746.90	\$ 570,983.76	\$2,588,304.24	\$6,380,785.08	\$9,510,073.08
Postwar Secondary	5,120,602.90	2,222,223.00	1,347,522.82	2,186,516.88	167,351.23	1,981,296.77	3,506,738.20	5,455,386.20
Postwar Urban	12,240,542.49	3,715,608.00	2,365,710.15	3,095,457.38	454,341.71	5,531,030.29	8,106,696.06	14,092,068.06
Postwar Interstate	16,924,791.00	26,404,511.00	7,031,424.47	13,148,799.80	3,506,310.98	22,916,008.94	16,206,503.28	42,628,823.20
Postwar Class D Funds		4,394,431.00					4,394,431.00	4,394,431.00
Postwar Class L Funds		1,357,629.00					1,357,629.00	1,357,629.00
TOTAL	\$42,112,243.31	\$29,647,895.00	\$13,227,031.91	\$22,286,020.96	\$4,998,987.68	\$33,016,640.24	\$39,952,783.52	\$77,968,411.44

NOTE:—The status of the \$39,952,783.52 available for project agreements is as follows:
 In planning, surveying and engineering stage \$21,936,544.03
 Specific projects programmed and under consideration \$14,734,032.00
 Unprogrammed \$3,282,207.49

STATEMENT OF FEDERAL AID RECEIPTS, BY PROJECT AGREEMENTS,
FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

PROJECT NUMBER	ROUTE NUMBER	LOCATION OF PROJECT	PROGRAM	TOTAL AGREEMENT	RECEIPTS TO JULY 1, 1956	RECEIPTS FISCAL YEAR ENDED		BALANCE, JUNE 30, 1958	
						JUNE 30, 1957	JUNE 30, 1958	EARNED—UNCOLLECTED	UNDER PROJECT AGREEMENT
A-116-2		Mt. Savage School Road	FAS	\$ 128,009.46	\$ 114,000.00		\$ 13,609.46	20,000.00	
A-118		Paving of Frederick Street in Cumberland	FAP	275,000.00	200,000.00	16,000.00		50,193.00	26,124.00
A-161-7		Rawlings toward McCoole	FAP	373,200.00		55,205.00	241,588.00		
A-161-1		National Pike—Martin Mountain Reclamation	FAP	630,000.00		320,071.00	299,513.00	10,416.00	116,760.00
A-165-1		Narrows Park to Corriganville	FAS	117,000.00		18,978.00	196,391.00	51,771.00	
A-165-2		Bridge over Braddock Run on Corriganville Road	FAS	99,100.00		19,700.00	18,353.00	16,437.00	14,910.00
A-166		Dorsey Road toward Jessups Road	FAS	103,119.03	81,000.00	209,975.00	112,171.03		
AA-318-9		Baltimore County Beltway—From Nursery	FAP	376,311.52	316,800.00	59,514.52			
AA-460-2		Anne Arundel and Baltimore County Beltway Underpass at Old Annapolis Road	I	880,830.00			275,263.00	59,152.40	516,114.60
AA-130-1		Anne Arundel and Baltimore County Beltway from Ultimate U. S. 301 to Glen Burnie By-Pass	FAP	228,216.67	29,280.00	85,261.00	113,675.67		
AA-106-6		Baltimore County Beltway—Nursery	FAP	401,785.73	116,350.00	244,121.00	41,312.73		
AA-160-10		Road to Patapsco River	I	208,853.00			145,360.40	133.60	61,359.00
AA-185-6	U. S. 301	Glen Burnie By-Pass to Benfield	FAP	178,500.00		75,293.00	93,856.00	9,351.00	
AA-185-8	U. S. 301	Benfield to south of Millersville	FAP	113,750.00			64,970.00	1,155.00	77,625.00
AA-188-3	Md. 2	From a point at Md. 258 southerly toward Friendship	FAP	115,900.00			25,613.00	4,191.00	85,706.00
AA-525		Bridge and approaches over South River at Riva	FAS	22,500.00					22,500.00
B-57-8-30		Baltimore-Harrisburg Expressway—0.50 miles south of Bunker Hill Road toward Gunpowder Falls	IN	281,312.36	23,680.00	217,779.00	30,853.36		102,003.00
B-57-8-31		Baltimore-Harrisburg Expressway—Gunpowder Falls to Middletown Road	IN	102,000.00				22,770.00	76,230.00
B-57-8-32		Baltimore-Harrisburg Expressway—from Middletown Road to north of Parkton	I	99,000.00			48,847.00		49,037.00
B-57-8-34		Baltimore-Harrisburg Expressway—from Mt. Carmel Interchange to North Middletown Road	I	93,600.00			41,563.00		9,000.00
B-57-8-34		Baltimore-Harrisburg Expressway—from Middletown Road to North of Parkton	I	82,800.00			21,953.00		30,321.00
B-57-8-34		Baltimore-Harrisburg Expressway—Parkton to Pennsylvania Line	I	108,000.00			58,941.00		380,610.00
B-57-8-35		Baltimore-Harrisburg Expressway—from north of Parkton to Pennsylvania Line	I	389,610.00					198,676.00
B-57-8-38		Baltimore-Harrisburg Expressway—Dual bridges over Gunpowder Falls	I	527,130.00			28,151.00		11,614.80
B-57-8-39		Baltimore-Harrisburg Expressway—Southbound lane bridge over Bunker Hill Road	I	65,610.00			16,930.00	1,065.20	
B-57-8-41		Baltimore-Harrisburg Expressway—Bridge carrying York Road over Expressway	I	419,820.00			41,646.00	7,834.20	400,339.80

B-578-43	Baltimore - Harrisburg Expressway — Bridge carrying relocated Md. 439 over Baltimore-Harrisburg Expressway.	I	121,680.00	566,270.00	103,887.15	23,662.00	5,541.20	92,476.80
B-578-44	Baltimore-Harrisburg Expressway.	I	94,590.00			22,570.00	4,861.10	67,158.90
B-635-1	Baltimore County Beltway from Penna. R.R. Bridge to a point east of York Road.	FAP	670,157.15	566,270.00	103,887.15			
B-635-5	Baltimore County Beltway — from Dulane Valley to Cromwell Bridge.	I	877,387.00		775,055.00		62,318.00	40,013.00
B-635-9	Baltimore County Beltway—Belair Road to Northeast Expressway.	I	266,426.00		161,806.00			104,620.00
B-635-11	Baltimore County Beltway—Patapsco River to south of Wilkens Avenue.	I	3,421,894.00		1,531,150.00	22,522.00	39,551.00	1,828,671.00
B-635-12	Baltimore County Beltway—Wilkens Avenue to U. S. 40	I	4,072,653.00		1,512,123.00	526,730.00		2,033,800.00
B-635-26	Baltimore County Beltway—Bridge and Approaches over Penna. R.R.	FAP	301,800.00	241,440.00		30,000.00		30,660.00
B-635-30	Dulane Valley Road and Bridge over Beltway and approach to Dulane Valley Road.	FAP	312,279.47	88,110.00	172,568.00	51,571.47		
B-635-35	Bridges and approaches over Baltimore County Beltway at Providence Road.	IN	81,249.00		56,180.00	12,162.00	12,094.51	812.49
B-635-36	Baltimore County Beltway Overpass at Cromwell Bridge Road.	IN	152,204.00		51,581.00	27,122.00	61,324.68	12,176.32
B-635-47	Baltimore County Beltway at Md. 7	FAU	88,595.00			57,496.00	10,722.15	20,376.85
B-635-48	Baltimore County Beltway—Bridge over Pulaski Highway.	FAU	179,715.00			103,650.00	38,324.85	37,740.15
B-635-51	Baltimore County Beltway—Bridge over Hollins Ferry Road.	IN	172,671.00		120,709.00	25,105.00	25,130.29	1,726.71
B-635-52	Baltimore & Ohio R.R. Underpass on Baltimore County Beltway at Laubsdowne.	IN	554,202.00		167,958.00	220,214.00	132,777.84	33,252.16
B-635-53	Baltimore County Beltway—Washington Boulevard Underpass.	IN	231,251.00		103,800.00	90,586.00	34,552.41	2,312.59
B-635-54	Baltimore County Beltway—Benson Avenue Overpass.	IN	144,400.00		46,200.00	74,020.00	21,836.00	1,444.00
B-635-55	Baltimore County Beltway—Bridge over Southwestern Boulevard and Leeds Avenue.	IN	614,519.00		191,194.00	273,546.00	149,779.00	
B-635-58	Baltimore County Beltway—Dual bridges over Wilkens Avenue.	I	328,410.00		77,809.00	188,261.00	59,055.90	3,284.10
B-635-59	Baltimore County Beltway—Fredrick Road Underpass.	IN	179,361.00		62,840.00	84,111.00	30,616.39	1,793.61
B-635-60	Baltimore County Beltway—Edmondson Avenue Overpass.	IN	161,554.00		96,000.00	39,564.00	23,774.46	1,615.54
B-635-61	Baltimore County Beltway overpass at Ingleside Avenue.	IN	141,293.53		99,360.00	41,483.53		
B-635-62	Baltimore County Beltway — Dual Bridges over National Pike U. S. 40	I	341,514.00			77,544.00	62,476.71	201,493.26
B-635-87	Baltimore County Beltway from U. S. 40 to Joppa Road; from Loch Raven Boulevard to Belair Road; from Belair Road to Northeast Expressway Interchange.	IN	427,200.00		87,200.00	151,856.00		185,144.00
B-710-1	Park Heights Avenue from Valley Road southerly toward Ecclesium.	FAS	80,600.00			27,490.00	6,362.00	46,748.00

EXHIBIT J, Schedule 1—Continued

EXHIBIT J, Schedule 1 Continued
 STATEMENT OF FEDERAL AID RECEIPTS, BY PROJECT AGREEMENTS,
 FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

Project Number	Route Number	Location of Project	Program	Total Agreement	Receipts to July 1, 1956	Receipts Fiscal Year Ended		Balance, June 30, 1958	
						June 30, 1957	June 30, 1958	Earned- Uncollected	Unearned
B-732		Security Boulevard from Baltimore City to Cook's Lane to Proposed Serial	FAP	230,000.00					
B-733		Merritt Boulevard from Wise Avenue to German Hill Road	FAP	205,000.00					
C-295-1		Dure's Beach Road	FAS	102,000.00					
C-257-3		Md. 101 from Hillsboro By-Pass to Denton	FAP	196,314.03		110,135.00	31,079.00	6,661.00	230,000.00
C-300A		Old Oak Grove Road	FAS	1,230.00			56,173.03		205,000.00
C-300B		Md. 101 to Bloemery Road	FAS	1,400.00			1,230.00		64,260.00
C-301A		Md. Zion and Katie Road	FAS	3,800.00					
C-302A		Jumpdown to Queen Anne's County Line	FAS	950.00					
C-302B		Md. 696 toward Preston	FAS	2,150.00					
C-303A		Friendship Road	FAS	8,920.00					
C-303B		Harris Thierhoff Road	FAS	6,800.00					
C-304		Linwood Jarred Road	FAS	7,770.00					
C-305A		Sharks Store Road	FAS	3,100.00					
C-305B		Bloemery Church Road	FAS	2,180.00					
C-270A		Quintas Road	FAS	6,580.00					
C-270B		Scapps Store Road	FAS	1,720.00					
C-271A		Cedar Lane Road	FAS	2,160.00					
C-271B		Thawley's Church Road	FAS	1,100.00					
C-273A		Puffer Road	FAS	5,030.00					
C-359A		Walkfield Valley Road	FAS	16,100.00				16,100.00	
C-359B		Marston Road	FAS	7,850.00					
C-359C		Fleming and Brodbeck Roads	FAS	15,300.00					
C-359D		Marrontsville Road	FAS	9,050.00					
C-359E		Harrisville Road	FAS	13,190.00					
C-359F		Braung's Road	FAS	10,075.00					
C-301A		Bohemia Mills Road	FAS	150.00					
C-352-2		Bridge over Penna. R. in North East	FAS	225,680.27	112,405.00				
C-352-1		Rising Sun Relocation	FAP	293,175.53					
C-305-1		Elkton to Fairhill	FAS	260,000.00					
CH-257-10		White Plains to Lyon's Corner	FAP	118,923.28	111,000.00				
CH-257-12		Waldorf to White Plains	FAP	106,911.44	82,800.00				
CH-257-13		White Plains to Lyon's Corner Stage	FAP	81,328.35	69,280.00				
CH-257-18		Lyon's Corner towards Bel Alton	FAP	307,700.00					
CH-309A		Md. 231 to Dubois	FAS	9,440.00					
CH-310X		Md. 225 to Md. 184	FAS	3,210.00					
CH-311A		Gilbert Swamp to St. Mary's County Line	FAS	4,220.00					
CH-313X		Rison to F.A.S. 324 at Ironside	FAS	1,880.00					
D-238-1		Flushing Light Signals—Pennia. R. R. at Hurlock	FAS	5,881.61					
D-238-1		Hurlock—East New Market Road	FAS	207,380.04	81,510.00				
D-255X		Hurlock to East New Market	FAS	1,180.00					
D-258		Hubbard Road	FAS	193,800.00					
D-258		Cambridge—Hudson Road	FAS					1,645.00	168,606.00

D-259X	Green Briar Road.	FAS	4,570.00	1,570.00					
D-260X	Baitly Road	FAS	2,780.00	2,780.00					
D-261X	Horns Point Road	FAS	5,100.00	5,100.00	3,260.00				
D-262X	Hicksburg Road	FAS	5,350.00	5,350.00					
D-265X	Hobbsard Road	FAS	2,500.00	2,500.00	2,800.00				
D-266X	Woodpecker Road	FAS	4,400.00	4,400.00					
D-267X	Wynson Road	FAS	3,100.00	3,100.00					
D-268X	Wright's Wharf Road	FAS	6,700.00	6,700.00					
D-269X	Pue Top Road	FAS	1,300.00	1,300.00					
D-270X	Baker Road	FAS	4,200.00	4,200.00					
D-271X	River Road	FAS	2,850.00	2,850.00					2,250.00
D-272X	Gravel Branch Road.	FAS	2,250.00	2,250.00	3,050.00				
D-273X	Maiden Road	FAS	3,650.00	3,650.00					3,790.00
D-274X	Coursey Bridge Road	FAS	3,750.00	3,750.00					3,180.00
D-275X	Coursey Bridge Road	FAS	5,180.00	5,180.00					3,934.00
D-276X	Sandy Hill Road	FAS	2,800.00	2,800.00					
D-277X	Old Field Road	FAS	12,730.00	12,730.00	8,796.00				
D-278X	Smithville Road.	FAS	27,370.00	27,370.00	27,370.00				
D-281X	Egypt Road	FAS	9,300.00	9,300.00	6,850.00				2,450.00
D-282X	FAS 707 south of New Market toward FAS 61	FAS	7,750.00	7,750.00					
D-283X	Maiden Forest Road	FAS	6,300.00	6,300.00					
D-284X	Williamsburg north toward Federalsburg	FAS	4,350.00	4,350.00					
D-285X	Petersburg Road	FAS	3,340.00	3,340.00					3,340.00
D-286X	Plantation Road	FAS	4,570.00	4,570.00					
D-287X	Wesley Church Road	FAS	4,400.00	4,400.00	4,570.00				
D-288X	Bobtown Road	FAS	6,950.00	6,950.00					4,400.00
D-289X	Rhodesville—Harrison Ferry Road	FAS	5,360.00	5,360.00	5,360.00				6,950.00
D-290X	Cooks Point Road	FAS	6,120.00	6,120.00					6,120.00
F-490-4	Fredrick By-Pass—Shaw Road to a point west of U. S. 15 Interchange	I	1,117,286.00	1,117,286.00	337,722.00				390,720.00
F-490-5	Fredrick By-Pass northwest of Washington National Pike to 0.10 mi. southeast of Fredrick	I	441,270.00	441,270.00	361,105.00				62,968.30
F-490-5	Fredrick By-Pass southeast of Fredrick to a point south of Patrick Street	FAP	87,950.00	87,950.00	17,166.00				15,960.00
F-490-6	Fredrick By-Pass—Bridge over U. S. 40 Interchange	FAP	118,000.00	118,000.00	81,980.00				17,700.00
F-490-9	Fredrick By-Pass—Bridge over B. & O. R. R. and relocated South Street	I	242,460.00	242,460.00	135,008.00				62,684.00
F-490-12	Fredrick By-Pass from U. S. 40 to Mottier Avenue	FAP	892,250.00	892,250.00	194,949.00				45,958.50
F-490-14	Fredrick By-Pass from Mottier Avenue to Tuscarora	FAP	289,500.00	289,500.00	169,808.00				32,528.00
F-490-20	Fredrick By-Pass—Spur to Liberty Road Bridge carrying Mottier Avenue over Fredrick By-Pass.	FAP	115,500.00	115,500.00	36,993.00				78,507.00
F-508-8	Ceresville to Woodshoro	FAP	110,900.00	110,900.00	59,321.00				21,729.20
F-522-2	Thurmont By-Pass.	FAS	367,000.00	367,000.00	162,261.00				32,249.00
F-522-3	U. S. 15 Bridge over Western Maryland R.R. on Thurmont By-Pass.	FAP	600,000.00	600,000.00	363,056.00				172,490.00
F-522-4	U. S. 15 Bridge over Hunting Creek on Thurmont By-Pass	FAP	114,750.00	114,750.00	74,376.00				25,098.00
F-537-10	Bridge over Baltimore & Ohio R.R. on new U. S. 40	FAP	91,054.95	91,054.95	41,693.95				
			338,559.94	282,000.00	46,559.94				

EXHIBIT J, Schedule 1—Continued
 STATEMENT OF FEDERAL AID RECEIPTS, BY PROJECT AGREEMENTS,
 FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

PROJECT NUMBER	ROUTE NUMBER	LOCATION OF PROJECT	PROGRAM	TOTAL AGREEMENT	RECEIPTS TO JULY 1, 1956	RECEIPTS FISCAL YEAR ENDED		BALANCE, JUNE 30, 1958	
						JUNE 30, 1957	JUNE 30, 1958	EARNED—UNCOLLECTED	UNEARNED
F-537-13		Monocacy River Bridge—Superstructure deck and railing	IN	121,052.98	93,164.51				
F-537-13		Monocacy River Bridge—Superstructure deck and railing	FAP	58,035.49		27,888.47			
F-578-1		Jefferson Street to South Street in Frederick City	FAP	38,524.00		31,343.00	7,181.00		
F-581X		Coppermine Road	FAS	3,100.00			3,100.00		
F-588		Yellow Springs—Bethel	FAS	12,411.55		12,411.55			
F-588		Bethel—Mountaindale	FAS	11,129.25		11,129.25			
F-595		Gravel Hill Road	FAS	17,303.47			4,873.47		
F-597		Lynn Burke Road	FAS	43,796.35		29,673.00	14,126.35		
F-598X		Lansville Road	FAS	11,613.15		11,613.15			
F-599X		Weddle Road	FAS	11,000.00			11,000.00		
F-600X		Ball Road	FAS	5,870.00			5,870.00		8,810.00
F-601X		Water Street Road	FAS	8,810.00			7,340.00		
F-602X		Eyler's Valley Road	FAS	7,340.00			6,268.00		8,702.00
F-610X		Mountaindale Fish Hatchery Road	FAS	15,000.00			6,097.00		20,103.00
F-611X		Mosser Road	FAS	26,200.00					6,120.00
F-614X		Coppermine Road	FAS	6,120.00					6,120.00
G-268-1	U. S. 219	Free U. S. 40 to Pennsylvania State Line	FAP	184,977.00	3,700.00	136,900.00	44,377.00		
G-270-1	U. S. 219	Relocate bridge over Baltimore & Ohio R.R. and Yongehobony River	FAP	116,450.00					116,450.00
G-277-1		Bridge over Baltimore & Ohio R.R. at Bloomington	FAS	155,520.00	60,652.00	63,764.00	81,614.00	31,104.00	110,400.00
G-277-2		Sweaton—Bloomington Road	FAS	345,000.00		112,380.00		40,606.00	40,606.00
H-201-2		Rock Spring Road	FAS	320,000.00		91,506.00	131,277.00	39,617.00	57,600.00
H-302		Bridge over Deer Creek on Grer Nursery Road	FAS	48,118.89	39,280.00	8,838.89			8,170.00
H-306X		Stockton Road	FAS	8,170.00					
H-405X		Lapidum Road	FAS	4,980.00		4,980.00			
H-408X		Whittaker Mill and Ring Factory Roads	FAS	5,530.00		5,530.00			
H-416X		Tallate Road	FAS	6,200.00					6,200.00
H-418X		Wheel Road	FAS	4,220.00					4,220.00
H-424-1		Bridge Road	FAS	67,300.00			2,579.00	786.00	63,935.00
H-424X2		Pleasantville Road	FAS	2,520.00					2,520.00
H-424X1		Bridge over Bynum Run	FAS	40,873.01		5,151.00	33,722.01		
H-424X-1		Woodstock Hill Road approaches to Bynum Run Bridge	FAS	1,410.00			612.00		828.00
H-425X		Reichs Road	FAS	7,500.00			2,851.00		4,649.00
H-426X		Phillips Mill Road	FAS	8,510.00			3,102.00		5,708.00
H-427X		Morse Road	FAS	6,800.00		6,800.00			
H-428X		Sharon Road	FAS	3,100.00		3,100.00			
H-429X		Sharon Road	FAS	10,100.00					
H-429X		Cox Road	FAS	1,380.00		1,380.00	3,481.00		6,706.00
H-430X		Cared Road	FAS	4,960.00		4,960.00			
H-431X		St. Mary's Road	FAS	4,960.00					

H-432X	Deep Run Road	FAS	4,740.00	4,740.00					3,050.00
H-433X	Scarboro Road	FAS	6,340.00	6,340.00					4,175.00
H-434X	Wenover Road	FAS	4,150.00	4,150.00					11,510.00
H-435X	Wheel Road	FAS	3,050.00					5,765.00	
H-441X	Reeherd Road	FAS	9,940.00						
H-442X	Laurel Brook Road	FAS	1,510.00						
H-443X	Carr's Mill Road	FAS	2,930.00					2,930.00	
H-444X	Moore's Mill and Heighe Roads	FAS	9,720.00						
H-445X	Laurel Bush Road	FAS	7,900.00						9,720.00
H-446X	Wheel Road	FAS	4,360.00						7,900.00
H-447X	Carsin's Run Road	FAS	16,000.00						4,360.00
H-448X	Adino—Stepney Road	FAS	11,940.00						9,480.00
H-449X	Deep Run Road	FAS	1,940.00						3,253.00
H-450X	Cherry Hill Road	FAS	13,500.00						1,940.00
H-451X	Salern Church Road	FAS	10,260.00						13,500.00
H-452X	Bradenbaugh Road	FAS	4,440.00						10,260.00
Ho-288X	Daisy Road	FAS	7,600.00						7,600.00
Ho-290X	Old Frederick Road—Md. 273 toward Slacks Corner	FAS	7,550.00	4,300.00					
Ho-291X	Old Frederick Road—Md. 32 toward Md. 273	FAS	2,280.00						
Ho-295X	Honewood Road	FAS	3,220.00						
Ho-296X	Old Frederick Road	FAS	6,490.00						
Ho-297X	Old Montgomery Road from Pfeifer's Corner to Montgomery Road	FAS	2,100.00						
Ho-298X	Berger Road from Md. 32 to Guilford Road	FAS	3,240.00						
K-211-1	Galena to Blue Star Memorial Highway	FAS	137,400.00						24,888.00
K-216-1	Galena toward Massey	FAS	74,500.00						59,663.00
K-218X	Pomona to Lanckford	FAP	5,350.00						47,637.00
K-219-1	West of Chesterville northerly toward Brownstown	FAS	10,445.61						
K-219-4	North of Millington to Blue Star Memorial Highway	FAS	10,597.03						
K-210X-2	Millington to Blue Star Memorial Highway	FAS	2,610.00						
K-210X-2	Brownstown Road	FAS	2,390.00						2,610.00
K-223-1	Stilpood Neck Road	FAS	6,987.10						2,390.00
K-223-4	Snavittville to east of Newton	FAS	21,979.28						6,987.10
K-225-1	West of Chesterville northerly to Black's Station	FAS	18,800.00						3,839.28
K-225X-2	Black's Station	FAS	3,970.00						3,308.00
M-185-10	Washington National Pike and Brown Station Road	FAS	51,610.77	42,000.00					
M-485-16	Washington National Pike north of Falls Road to Tuckerman Lane	I	1,494,000.00						119,520.00
M-185-16	Washington National Pike north of Falls Road to Tuckerman Lane	I	62,550.00						62,550.00
M-485-20	Bridge carrying Montrose Road over Washington National Pike	I	168,368.72						
M-185-24	Washington National Pike Bridge over Georgetown National Pike at Old	I	326,520.00						

EXHIBIT J, Schedule 1 - Continued

EXHIBIT J, Schedule 1—Continued
**STATEMENT OF FEDERAL AID RECEIPTS, BY PROJECT AGREEMENTS,
 FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958**

PROJECT NUMBER	ROUTE NUMBER	LOCATION OF PROJECT	PROGRAM	TOTAL AGREEMENT	RECEIPTS TO JULY 1, 1956	RECEIPTS FISCAL YEAR ENDED		BALANCE, JUNE 30, 1958	
						JUNE 30, 1957	JUNE 30, 1958	EARNED—UNCOLLECTED	UNEARNED
M-485-33		Washington National Pike from Tucker-	I	1,977,013.00		1,264,416.90		712,596.10	
M-485-35		man Lane to Wisconsin Avenue.							
		Washington National Pike Bridge over	I	211,056.00		159,151.00	35,012.40	16,884.00	
		Washington National Pike at Tucker-							
		man Lane.							
M-512-12		Bridge and Approaches over Washington	I	576,900.00		49,892.00	2,029.00	521,979.00	
		Circumferential Highway at Old							
		Bladensburg Road	I	2,273,400.00		112,281.00	24,123.00	2,136,996.00	
M-512-17		Interchange at Wisconsin Avenue.	I	57,135.00		51,421.00		5,714.00	
M-512-17		Interchange at Wisconsin Avenue.	I						
M-512-31		Washington Circumferential Highway	I	52,200.00				52,200.00	
		from Jones Mill Road to west of Indian							
		Head Road	I	152,600.00		116,679.00	34,395.00	1,526.00	
M-517-6		Bridge over Baltimore & Ohio R.R. and	FAU	470,000.00		363,239.00		106,761.00	
		Md. 193 in Kensington							
M-526-1		Viers Mill Road—Wheaton toward Viers	FAU	290,000.00		37,043.00		51,423.00	
		Mill Village							
M-526-1		Viers Mill Road—Wheaton toward	FAP	410,210.92	390,995.00	19,215.92			
		Rockville							
M-526-2		Viers Mill Road—Rockville toward	FAP	277,900.00	177,725.00	100,175.00			
		Wheaton							
M-526-3		Viers Mill Road—Bridge over Rock Creek	FAU	82,891.62	67,120.00	15,771.62			
P-631-33		Bridge over Washington Circumferential	FAP						
		Highway at Washington-Annapolis							
		Expressway	I	414,000.00		283,039.00	60,581.00	70,380.00	
P-695-1		Bridge over Anacostia River U. S. 1	FAU	362,853.03	261,120.00	49,732.00			
		Alternate							
P-721-2		University Lane from Chatham to Branch-	FAU	563,601.03	481,250.00	63,601.03			
		ville Road							
P-721-4		University Lane Relocated from Chat-	FAU	55,996.29	52,000.00	3,996.29			
		ham to Baltimore-Washington Blvd.							
P-722-1		Washington Circumferential Highway	FAU	101,880.00				101,880.00	
		near Indian Head Road							
P-722-44		Washington Circumferential Highway	I	232,740.00		180,886.00	14,615.60	37,238.40	
		Relocation of Ardmore-Ardwick Road							
P-721-10		Approaches to Kenilworth Avenue Un-	FAU	39,650.00				39,650.00	
		derpass							
P-721-19		River Road from and including Kenil-	FAU	1,345,000.00	255,550.00	609,298.00	290,373.00		
		worth Interchange to D. C. Line							
P-721-24		Kenilworth Avenue—Extension of Con-	FAU	180,000.00	65,464.00	82,577.00		31,959.00	
		tract P-721-11 to D. C. Line							
P-731-2		University Lane from Coleville Road to	FAU	545,000.00	257,094.00	189,321.00		98,582.00	
		New Hampshire Avenue							
P-736-1		Widening of New Hampshire Avenue,	FAU	71,987.86	57,378.00	14,609.86			
		Sligo Creek and Piney Branch							

P-736-2	New Hampshire Avenue-D. C. Lane to Montgomery County Line	FAU	995,456.92	677,250.00	182,750.00	135,456.92		
P-740	Riverdale Road to Captain John's Branch	FAS	25,600.00			25,600.00		28,800.00
P-812	George Washington Memorial Parkway	FAS	28,800.00					
Q-281-1	Dudley's Corner to Crumpton	FAS	178,600.00					42,516.00
Q-292X	Md. 543 to Md. 927	FAS	1,900.00		59,796.00			
Q-321X	Md. 904 toward Delaware State Line	FAS	2,200.00		1,900.00			
Q-322X	Md. 302 toward Beaton's Corner	FAS	2,600.00		2,600.00			
Q-323X	Price toward Ingleside	FAS	3,000.00		3,000.00			
Q-324X	Ralph's Wharf Road	FAS	1,900.00		1,000.00			
Q-325X	Md. 91 toward Md. 5	FAS	700.00		700.00			
Q-326X	Harnden toward Ingleside	FAS	4,400.00		4,400.00			
Q-330X	Pondtown toward Newnan's Corner	FAS	1,100.00		1,100.00			
Q-331X	Md. 901 to Burrisville	FAS	2,200.00		2,200.00			
Q-332X	Md. 542 toward Md. 540	FAS	2,600.00		2,500.00			
Q-333X	Burrisville toward Sycamards Neck	FAS	3,400.00		3,400.00			
Q-334X	Sudlersville to Md. 920	FAS	2,500.00		2,500.00			
Q-335X	Greys toward Greenwood Creek	FAS	3,300.00		3,300.00			
Q-336X	Md. 305 to Md. 19	FAS	2,850.00		2,850.00			
Q-337X	Md. 514 toward Pondtown	FAS	600.00		600.00			
Q-338X	Domon toward Narrow Point	FAS	1,900.00		1,900.00			
Q-339X	Ruthsburg toward Caroline County Line	FAS	2,600.00		2,600.00			
Q-340X	Hacker's Corner to Penns. R. R.	FAS	2,200.00		2,200.00			
Q-341X	Charles Hill—Pondtown Road	FAS	10,400.00					10,400.00
Q-342X	Saundersville—Goldshoro Road	FAS	9,060.00					9,060.00
Q-343X	Rolling Bridge Road	FAS	4,330.00					
Q-344X	Roe Road	FAS	5,820.00			4,430.00		
Q-345X	Dwight Tavern Road	FAS	9,550.00			5,820.00		
Q-346X	Island Creek Road	FAS	3,010.00			3,040.00		
Q-347X	Carter Road	FAS	1,940.00			1,940.00		
Q-348X	Crumpton toward Md. 544	FAS	840.00			840.00		
Q-349X	Baxter Road	FAS	2,190.00			2,190.00		
Q-350X	Nickerson Road	FAS	4,850.00			4,850.00		
Q-351X	Starkley's Corner to Island Creek Road	FAS	1,180.00			1,180.00		
Q-352X	Poplar School Road	FAS	4,560.00			4,560.00		
Q-353X	Corlica Neck Road	FAS	2,280.00			2,280.00		
Q-354X	Dubin Clark Road	FAS	1,220.00			1,220.00		
Q-355X	Howard Wilson Road	FAS	4,300.00			4,300.00		
Q-356X	John Brown Road	FAS	3,890.00			3,890.00		
Q-357X	Lieby Road	FAS	2,190.00			2,190.00		
Q-358X	Beaver Road	FAS	3,540.00			3,540.00		
Q-359X	Fogwell Road	FAS	2,460.00			2,460.00		
Q-360X	Deaver's Branch Road	FAS	3,730.00			3,730.00		
Q-361X	Robinson Road	FAS	1,590.00			1,590.00		
Q-362X	Clark Corner	FAS	1,860.00			1,860.00		
Q-363X	Bolton Woods Road	FAS	6,120.00			1,860.00		
Q-364X	Ralph's Wharf Road	FAS	1,860.00			1,860.00		
Q-365X	Hayden—White Marsh Road	FAS	1,100.00			1,100.00		
Q-366X	Piney Point Road Bridge and Approaches at St. George's Island	FAS	5,060.00			5,060.00		
Q-367X	Princess Anne By-Pass north of Md. 363 on existing Md. 13	FAP	199,000.00			199,000.00		
Q-368X	Extension of Md. 413 thru Crisfield College—Backbone Road	FAP	559,950.00			142,910.00		30,965.50
SM-316-1	Dublin Road	FAS	420,000.00			308,348.00		57,652.00
S-195-1			6,270.00			1,565.00		
S-202-1					5,160.00			
S-204X					4,705.00			
S-265X								5,060.00

EXHIBIT J, Schedule 1—Continued

EXHIBIT J, Schedule 1 Continued
**STATEMENT OF FEDERAL AID RECEIPTS, BY PROJECT AGREEMENTS,
 FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958**

Project Number	Route Number	Location of Project	Program	Total Agreement	Receipts to July 1, 1955	Receipts Fiscal Year Ended		Balance, June 30, 1958 Under Project Agreement	
						June 30, 1957	June 30, 1958	Earned—Uncollected	Unearned
S-206X		Manokin Road	FAS	4,820.00		4,820.00			
S-208X		Billy Overholt Road	FAS	5,300.00		1,711.00			
T-168-1		Tilghman Island Road	FAS	211,300.00		35,187.00		8,247.00	197,856.00
W-428-1		Bridges over Franklin and Church Streets in Hagerstown	FAU	110,701.00		123,673.00	17,025.00		
W-428-5		Washington Street in Hagerstown over tracks of Penna. R. R. and Western Maryland R. R.	FAU	160,800.00		131,592.00	21,384.00		4,824.00
W-428-6		Railroad embankment along lines of Western Maryland R. R. and Penna. R. R. in Hagerstown	FAU	588,600.00					588,600.00
W-428-6		Placing of ballast ties and rails along line of railroad embankment of Western Maryland R. R. and Penna. R. R. near Red Bank	FAU	1,313,300.00		7,710.00			1,313,360.00
W-428-6		Crossing Pike from Hagerstown limits to Md. 308, Carroll	FAS	288,650.00		51,156.00	181,725.00	49,582.50	2,886.50
W-446-3		U. S. 11 Relocation from U. S. 40 to Pennsylvania State Line	I	1,002,906.00		311,458.00	1,811,337.00	577,691.36	1,272,419.64
W-446-3		U. S. 11 Relocation from U. S. 40 to Pennsylvania State Line	IX	358,564.22		208,847.00	733.00		150,931.22
W-446-1		U. S. 11 Relocation—Bridge over U. S. 11	FAS	758,970.00			494,292.00	168,011.90	98,666.10
W-451-1		Williamsport—Carters Road	FAS	530,000.00			13,635.00	1,965.00	511,100.00
W-456X		Modify flashing light signal at Warboon Downsville Road	FAS	2,802.05		2,802.05			
W-462	Md. 62	Marsh Pike	FAS	81,000.00			81,000.00		
W-461		Norfolk and Western R. R. Crossing at Spothuans	FAS	2,700.00					2,700.00
W-465		Norfolk and Western R. R. Crossing at St. James	FAS	2,700.00					2,700.00
W-466		Norfolk and Western R. R. Crossing at Antietam	FAS	2,700.00					2,700.00
W-467		Norfolk and Western R. R. Crossing at Grimes	FAS	2,700.00					2,700.00
Wi-285-1		Tonybank Bridge	FAS	49,450.00			35,685.00	3,380.50	10,384.50
Wi-292-2		Salisbury By-Pass from east bank of Wisconsin River to Penna. R. R.	FAS	757,750.00					757,750.00
Wi-292-2		Salisbury By-Pass—Mill Street Connection	FAU	91,500.00					91,500.00
Wi-292-5		Bridge over east branch of Wisconsin River on Mill Street	FAU	103,050.00			71,691.00	16,785.00	12,474.00
Wi-301X		Tingle Road	FAS	6,050.00					

W-302X	Melson Road to Bob Smith Road	FAS	3,800.00						
W-303X	Forrest Grove Road	FAS	13,270.00					13,270.00	
W-305X	Rockwalkin Road	FAS	3,850.00					3,850.00	
W-306X	Mardela Road	FAS	4,904.46					4,904.46	
W-352-2	Md. 452 to St. Martin	FAP	586,000.00					72,918.00	14,982.00
W-360X	Dowms Road	FAS	5,050.00					5,050.00	
W-361X	Cedar Lane Road	FAS	5,950.00					5,950.00	
W-362X	Old Furnace Road	FAS	3,150.00					3,150.00	
W-363X	Paw Paw Bridge Road	FAS	4,450.00					4,450.00	
ES-260	East of Hagerstown and Wagner's Cross-wards to Md. 522	I	995,490.00					321,703.00	643,322.00
BC-190	Bridge over Penna. R. R. and Western Maryland R. R. at Monroe Street	FAU	230,040.00	117,320.00				66,712.00	46,008.00
BC-192	Jones Falls Expressway—Calvert Street Bridge	FAU	212,000.00					127,877.00	38,443.00
BC-193	Jones Falls Expressway—Conduits from Guilford Avenue to Howard Street	FAU	1,270,000.00					45,680.00	348,451.00
BC-194	Jones Falls Expressway—North Avenue Bridge to 300' north of Newington Ave.	FAU	1,270,000.00					514,727.00	185,705.00
BC-195	Jones Falls Expressway from south of Biddle Street to south of Guilford Ave.	FAU	544,700.00					334,466.00	1,040,040.00
BC-197	Bridge at Liberty Heights Avenue over Western Maryland R. R.	I	1,040,040.00					19,110.00	208,690.00
BC-199	Jones Falls Expressway—Guilford Avenue to Howard Street	FAU	227,800.00					39,243.00	525,237.00
BC-207	Jones Falls Expressway to northern city boundary	I	564,480.00						1,080,000.00
BC-208	Jones Falls Expressway—Wind tunnels at North Avenue	I	1,080,000.00						13,320.00
BC-211	Jones Falls Expressway—Charles Street to Biddle Street	I	13,320.00						350,100.00
AW-694	State Wide Horizontal and Vertical Control Markers	I	350,100.00						1,193,350.00
AA-428-5	Lions Creek toward Owings	I	216,000.00					96,650.00	
C-197-6		FAS	36,190.29					36,190.29	
AA-464-3	Baltimore County Beltway—Bridge over Patapsco River	I	1,448,100.00					1,020,581.00	202,734.00
B-635-50	From a point north of Annapolis—Washington Expressway to Conways	FAP	508,200.00					418,826.00	5,082.00
AA-485	Bridge over Patuxent River	FAP	228,000.00					172,465.00	18,240.00
P-756	Bridge over Deep Creek on Hanover Road	FAS	26,300.00					21,538.00	1,315.00
AA-487	Baltimore County Beltway—from Dulane to Cromwell Bridge	I	2,482,460.00					908,730.00	1,441,073.00
P-750-1	Baltimore County Beltway—Dulane Valley Road to Cromwell Bridge	IX	187,200.00						187,200.00
AA-519-1	Bridge over Baltimore County Beltway at Westland Boulevard	I	223,200.00					138,954.00	15,624.00
Ho-303-1	U. S. 40 Relocation—Baltimore City Line to a point on west side of Patapsco River	I	122,400.00						122,400.00
B-635-5	Baltimore, Washington Road from Baltimore City Line to Washington Circumferential Highway	I	62,437.00						62,437.00

EXHIBIT J, Schedule 1 Concluded
STATEMENT OF FEDERAL AID RECEIPTS, BY PROJECT AGREEMENTS,
FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

Project Number	Route Number	Location of Project	Program	TOTAL AGREEMENT	RECEIPTS TO JULY 1, 1956	RECEIPTS FISCAL YEAR ENDED		BALANCE JUNE 30, 1958	
						JUNE 30, 1957	JUNE 30, 1958	UNDER PROJECT AGREEMENT	UNEARNED
CH-272-5	MD. 231	Hughesville to Bondfield Liberty Road from Unionville, Relocation	FAS	38,400.00		38,400.00			
C-201-1			FAP	150,881.79		150,881.79			
F-518-2			FAP	292,093.38	246,000.00	46,093.38			
C-308-7		Ridgeville to New Market	FAP	85,400.00				11,518.00	70,882.00
F-537-17		Frederick By-Pass over Fourth Street and Seventh Street at Hagerstown	FAP	240,973.89	71,568.00	129,899.00			
F-190-18		Frederick Railway	IN	510,000.00					510,000.00
F-357-17		Frederick By-Pass from end of F-537-15-720 to F-190-1720	FAP	2,127,600.00			584,628.00	117,180.00	1,425,792.00
F-190-21		Baltimore National Pike Frederick to Wagner's Crossroad	F						
W-463		Washington National Pike from Tucker-Wagner's Crossroad	F						
M-185-22		Washington National Pike from Tucker-Wagner's Crossroad	F						
M-185-23		Georgia Avenue to Prince George's County Line on Washington Circumferential Highway	F	2,473,358.00			650,989.00	431,407.00	1,390,962.00
M-185-33			FAP	611,450.00			12,525.00	601.50	631,323.50
M-512-5		Bladensburg Road	FAP	712,385.00			187,523.00		524,862.00
M-512-13		Rockyville Pike from Grosvenor Lane to Md. 28 in Rockyville	FAP	732,615.00		177,405.00	555,210.00		
M-517-5		Wisconsin Avenue from Jones Bridge Road to Md. 28 in Rockyville	FAP	595,140.00			84,012.00	300,368.00	210,730.00
P-734-1		U. S. 11 Relocation - Bridge over Morgansville Road and bridge over Pottomac R.R.	F						
M-533-1		U. S. 11 Relocation - Bridge over Slowly Lane on Washington Circumferential Highway	F						
M-485-2		Bladensburg Road	FAP	431,550.00		19,599.00	224,800.00	72,969.50	114,181.50
M-533-1		Rockyville Pike from Grosvenor Lane to Md. 28 in Rockyville	FAP	121,348.00		121,348.00			
M-485-2		Wisconsin Avenue from Jones Bridge Road to Md. 28 in Rockyville	FAP	362,231.00					
M-485-2		U. S. 11 Relocation - Bridge over Morgansville Road and bridge over Pottomac R.R.	FAP	706,717.00					
W-446-6		U. S. 11 Relocation - Bridge over Slowly Lane on Washington Circumferential Highway	F	62,409.00					62,409.00
W-446-7		U. S. 11 Relocation - Bridge over Slowly Lane on Washington Circumferential Highway	F						
W-446-2		State Wide Highway Planning	FAS-P-I-I						
HPS-11(S)		State Wide Highway Planning	FAS-P-I-I						
HPS-11(P)		State Wide Highway Planning	FAS-P-I-I						
HPS-12(P)		State Wide Highway Planning	IN						
HPS-12(I)		State Wide Highway Planning	FAS-P-I-I						
HPS-17(P)		State Wide Highway Planning	FAS-P-I-I						
HPS-17(I)		State Wide Highway Planning	IN						
TOTALS				\$ 79,256,443.79	\$ 13,227,031.91	\$ 22,286,020.96	\$ 4,998,987.68	\$ 33,016,640.24	

EXHIBIT K

**GENERAL CONSTRUCTION AND OPERATING FUND
PROGRAM PRIOR TO JULY 1, 1954, FUND STATEMENT OF PROJECT EXPENDITURES
FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958**

DATE AUTHORIZED	PROJECT NUMBER	ROUTE NUMBER	LOCATION	DESCRIPTION	EXPENDITURES		AUTHORIZED TO COMPLETE PROJECTS IN PROGRESS JUNE 30, 1958	TOTAL
					WORK IN PROGRESS JULY 1, 1956	FISCAL YEAR 1957		
6-24-58 a	AA 533-1		Baltimore-Washington Expressway from Jessup to Dorsey	Acquisition of right-of-way		\$ 13,891.20	\$ 15,000.00	
a	AA 533X-2		Baltimore-Washington Expressway from Jessup to Dorsey	Clear and grub 30 acres for relocation of north-bound lane and construction of service area		26,885.49	27,500.00	
a	AA 533		Baltimore-Washington Expressway from Jessup to Dorsey	Preliminary engineering		6,543.55	6,543.55	
6-12-58 a	P 774-1	Md. 373	Aceokeek to T. B.	Acquisition of right-of-way		52,292.25	52,292.25	
d	P 774	Md. 373	Aceokeek to T. B.	Preliminary engineering	\$ 117.48	614.51	7,039.66	
5-22-58 a	M 189-11	U. S. 240	Washington National Pike at Brown's Station	Relocating poles		2,758.00	2,758.00	
4-30-58 a	U 198-7	Md. 333	Easton to Oxford	Preliminary engineering		500.00	500.00	
4-17-58 a	U 198-7	Md. 30	1 mile south of Manchester	Establish picnic area		2,051.89	2,400.00	
4-10-58 a	Ho 314-1	U. S. 29	U. S. 40 to New U. S. 40	Acquisition of right-of-way		628.75	1,000.00	
4-3-58 a	AW 703		State wide	Conducting an experiment in the field of continuously reinforced concrete pavements		71.25	15,000.00	
3-12-58 a	AW 700		State wide	Conducting experiments in erosion control		20.50	2,385.00	
3-12-58 a	AW 701		State wide	Conducting experiments in continuous reinforced concrete pavements		1,806.30	6,970.00	
2-6-58 a	Wo 371		Banding's Branch at Bishopville	Preliminary engineering		900.00	900.00	
11-29-57 a	AA 531		South of Airport Access Road to north of Md. 170	Preliminary engineering		2,420.74	8,000.00	
11-6-57 a	AW 695X		State wide	Compilation of the costs of various highway projects on the Interstate System as required by the Federal Aid Highway Act of 1956 under Section 114		2,300.13	5,000.00	
10-16-57 a	B 578-31		Baltimore-Harrisburg Expressway from south of Gunpowder Falls to Middletown Road	Acquisition of right-of-way		12,759.57	185,000.00	
a	B 578-45		Baltimore-Harrisburg Expressway from south of Gunpowder Falls to Middletown Road	Installation of new cable line		28,376.17	28,376.17	
8-28-57 a	F 547-3		Baltimore, National Pike from New Market to Jansville Road	Acquisition of right-of-way		15,579.25	20,000.00	
8-22-57 a	B 578-32		Baltimore-Harrisburg Expressway from north of Middletown Road to 1 mile north of Parkton	Acquisition of right-of-way		721.44	100,000.00	
a	B 578-46		Baltimore-Harrisburg Expressway from north of Middletown Road to 1 mile north of Parkton	Installation of new cable line		24,862.43	24,862.43	
8-8-57 a	B 635-94		Baltimore County Beltway from U. S. 40 to U. S. 1	Subsurface exploration at 36 structure sights	21.42	21,922.70	42,875.80	
8-8-57 a	AW 686		State wide	Preparation of estimated needs for various roads under Section 210 of Federal Highway Act of 1956		27,257.75	27,257.75	
7-17-57 a	Q 168X-51		Bartonsville, Md. 71 and Md. 456	Construction of concrete curb and sidewalk		1,465.47	1,465.47	
5-8-57 b	F 490-31	U. S. 40	Bartonsville Road northwestward toward Frederick; Bartonsville to Monocacy River; Monocacy River to .28 mile east of Frederick	Relocating poles	351.48	*	351.48	
5-1-57 b	B 578-36		Baltimore-Harrisburg Expressway from Gunpowder Falls to Pa. State line	Subsurface exploration at 9 locations	1,711.51	6,713.09	8,424.60	

Project No.	Project Description	Estimated Cost	Actual Cost	Balance	Remarks
5-1-57 b	D. C. line to Bryans Road	7,234.41	7,234.41		Preliminary engineering
5-1-57 b	Blue Star Memorial Highway from Queecstown to U. S. 213	69,277.90	69,277.90	5,722.10	Acquisition of right-of-way
c	Blue Star Memorial Highway from Queecstown to U. S. 213	627.30	627.30	4,253.27	Preliminary engineering
5-1-57 b	Relocating poles	1,603.56		*	Relocating poles
4-17-57 b	Establish picnic area	380.55		*	Establish picnic area
4-17-57 b	North of Earleigh Heights Road	1,810.69		*	Establish picnic area
4-2-57 b	Rockwalkin to Tyvaskin	492.88		*	Relocating poles
3-27-57 b	Laurel	5,525.34		*	Construction of cross-over thru median and storage lane
3-27-57 b	Intersection of Md. 405 and Md. 71	456.60		*	Relocating poles
3-20-57 b	Intersection of Shawan Road and Western Run Road on Baltimore-Harrisburg Expressway	551.63		*	Relocating power line
2-6-57 b	Baltimore-Harrisburg Expressway from 1 mile north of Parkton to Pa. line	1,745.51	376,407.23	46,847.26	Acquisition of right-of-way
1-30-57 b	AW 674	2,897.20		102.80	Research in all phases of highways, including planning, design, construction, operation and maintenance by the Maryland Joint Highway Research Program
1-30-57 b	AW 675	10,647.57	25,021.05		Continuation of transportation study
1-23-57 b	AA 2693-37	695.94	4,290.98		Preliminary engineering
12-21-56 b	P 792	23,839.88		*	1.757 mi. resurfacing—spec "B"
12-6-56 b	K 188-16	384.60	138.09	677.31	Acquisition of right-of-way
11-21-56 b	B 715X	1,796.46		*	Conversion of semi-actuated traffic signal to fully-actuated
11-21-56 b	K 188-15	1,313.91		*	Relocating poles
10-24-56 b	D 280X	6,045.50		*	Surfacing Muse, Gay and Poplar Streets—spec. "B"
10-18-56 b	Co 215-10	2,214.57		*	Relocating poles
10-18-56 b	AW 671	98,135.59	21,184.83	80,577.58	Preparation of detailed estimate of cost of completing Interstate Highway System
10-5-56 b	AA 516-1	634.06		365.94	Acquisition of right-of-way
b	AA 516	491.70	40.51	967.79	Preliminary engineering
10-5-56 b	P 791	6,835.28	1,612.01		Preliminary engineering
8-29-56 b	AA 517	3,281.96		*	Conversion of existing flasher signal to 2 phase fully-actuated
8-15-56 b	B 635-89	769.78		*	Relocating water main and fire hydrant
8-8-56 b	P 789X	4,487.02		*	Installation of fully-actuated traffic signal
8-8-56 b	E-S, 256	6,084.65	4,705.56	3,756.79	Engineering services of Rummel, Klepper and Kahl
7-31-56 b	H 437X	1,879.27		*	Establish picnic area
7-18-56 b	M 485-39	4,158.83		*	Relocating poles
7-11-56 b	P 787	300.00		300.00	Preliminary engineering
6-10-56 c	H 436X	1,648.66	181.05		Establish picnic area
6-10-56 c	Q 168-49	2,774.49		*	Relocating power line
6-13-56 c	AA 515X	5,121.53		*	Conversion of existing traffic signal to three-phase actuation; construction of left turn storage lane
6-13-56 c	F 578-1	79,043.83	6,554.15	11,590.24	404 ft. grading, drainage and surfacing—spec. "B"; acquisition of right-of-way

EXHIBIT K Continued

GENERAL CONSTRUCTION AND OPERATING FUND
PROGRAM PRIOR TO JULY 1, 1954, FUND STATEMENT OF PROJECT EXPENDITURES
FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

Date Authorized	Project Number	Route Number	Locality	Description	EXPENDITURES		Authorized to Complete Projects in Progress June 30, 1958	Total
					Fiscal Year 1957	Fiscal Year 1958		
6-13-56 e	M 551X		Intersection of U. S. 240 and Shady Grove Road	Construction of additional lane to increase movement of traffic	1,095.50		*	1,052.61
6-13-56 e	BRB 135		Chesapeake Bay Bridge	Permanent repairs to cables operating toll booths	2,157.81		*	5,803.50
5-21-56 e	B 582-31	Md. 111	Catonville	Share of cost for construction of storm drains	26,332.41		*	26,332.41
5-21-56 e	B 707X		Intersection of Md. 151 and New Battle-Groce Road	Installation of fully-actuated traffic signal	5,533.81		*	5,533.81
5-21-56 e	P 786X-1		Intersection of Md. 210 and Livingston Road; Md. 210 and Audrey Lane	Construction of left turn storage lanes	2,151.91		*	5,197.50
5-17-56 e	Co 261X	Md. 313	Federalburg	Establish picnic area	1,218.92	133.67	*	1,352.59
5-8-56 e	AA 316X	Md. 677	Odenton	Installation of underdrain at school	1,617.25	21.80	*	1,672.05
5-8-56 e	AA 311X	Md. 2	North end of Old Severn River Bridge	Surface treatment picnic area	508.25		*	568.25
5-8-56 e	M 553X		Md. 110 approaching Md. 193	Installation of overhead signs for right and left turn traffic movement	122.83	5.58	*	128.21
5-8-56 e	P 786	Md. 210	D. C. line to Charles County line	Preliminary engineering (aerial photography)	522.50		*	522.50
1-21-56 e	B 703X		Intersection of Md. 151 and Baltimore Street	Installation of fully-actuated traffic signal	1,182.31	111.81	*	1,591.15
4-21-56 e	B 701X		Intersection of Md. 588 and Kenwood Avenue	Installation of fully-actuated traffic signal	1,981.41	94.73	*	1,887.51
1-12-56 e	P 785X		Intersection of 57th Avenue and Md. 1	Installation of fully-actuated traffic signal	1,550.17		*	1,550.17
3-29-56 e	P 785X-1		Intersection of Md. 500 and Md. 501	Conversion of existing traffic signal to provide for a pedestrian indication on certain approaches	11.61	2,123.95	*	2,135.56
3-14-56 e	AA 512X		Intersection of Md. 2 and Md. 171	Installation of fully-actuated traffic signal	5,265.81		*	5,265.81
3-8-56 e	M 551X		U. S. 240 at Wisconsin Circle	Construction of storage lane for southbound traffic	2,758.52		*	2,758.52
2-9-56 e	AA 265-35	Md. 150	Parole	Relocation of underground cable	181.81		*	58,500.00
2-9-56 e	F 576-1	Md. 32	Relocation of Pa. line	Acquisition of right-of-way	192.28		*	377.09
2-9-56 e	M 519X		Baltimore-Harrisburg Expressway from south of Banker Hill Road to Pa. line	Installation of semi-actuated traffic signal	2,661.01		*	2,661.01
12-21-55 e	B 578-31		Baltimore County Beltway from U. S. 10 easterly to Nursery Road	Preliminary engineering	20,651.03	49,134.71	*	113,156.81
12-21-55 e	B 635-87		Bridge over B. & O. R.R. at Golden Ring	Preliminary engineering	66,962.92	28,137.23	*	181,037.23
12-21-55 e	B 696-1		Bridge over B. & O. R.R. at Golden Ring	Construction of multiple span steel bridge and approaches	155,915.71	75,001.91	8,018.51	240,919.05
12-21-55 e	F 696-11	U. S. 15	South of Mother Avenue to Tuscarora Creek	Acquisition of right-of-way	1,322.60	7,939.04		80,157.14
12-11-55 e	BRB 133		Chesapeake Bay Bridge	Acquisition of right-of-way	294,883.06	10,566.97		255,150.03
				Furnishing and installation of structural steel access facilities as additional aids to navigation	56,526.57	12,640.86		69,167.43
12-13-55 e	AA 368-29		Baltimore-Washington Expressway at Md. 176 Interchange	301 mt. grading, drainage, and surfacing-concrete	55,502.72	17.99	*	53,520.71
11-30-55 e	F 537-15	U. S. 10	Bartonsville Road northwesterly toward Frederick; Bartonsville to Monocacy River; Monocacy River to 28 mi. east of Frederick	194 mt. grading, drainage, and surfacing bituminous concrete	181,291.23	74,705.66		290,527.79
11-16-55 e	B 635-30		Baltimore County Beltway from .42 mi. east of U. S. 111 easterly to Md. 146; Md. 146 from north of Hampton Lane to south of Towson belt route	2,046 mt. grading, drainage, and surfacing spec. "B" and bituminous concrete; construction of dual steel beam bridge; acquisition of right-of-way	225,386.49	99,647.70	117,918.79	472,952.98
10-19-55 e	A 127-1	Md. 36	Bridge over George's Creek at Lonaconing	Construction of pedestrian bridge	6,380.92		*	6,380.92

10-19-55 c	B 635-51	U. S. 40	Jones Falls Expressway Connection to Baltimore County Beltway; Falls Road at Ruxton Road to Baltimore County Beltway at Joppa Road	1.638 mi. grading, drainage and surfacing—spec. "B" and bituminous concrete	233,025.78	165,984.82	168.85	*	399,179.45
10-19-55 c	Ho 23414	U. S. 40	.5 mi. west of West Friendship—Slacks Corner Road northwesterly to .114 mi. of Morgan Road and Intersection of Md. 5 with Henderson Road and Waterloo Road	Preliminary engineering	2,232.76	150.62		*	2,392.38
10-19-55 c	P 391X-21	U. S. 40		Improvement to intersections	12,967.66	1.01		*	12,968.67
10-19-55 c	W 451	Md. 65	Sharpsburg	Preliminary engineering	897.24	1,986.65	.96		3,884.85
10-10-55 c	AA 263-30	Md. 450	Relocated Md. 2—Md. 178	Preliminary engineering	2,825.53	1,615.69		*	4,441.22
8-30-55 c	D 238-1	Md. 307	East New Market to Hurlock	5.042 mi. grading, drainage and surfacing—bituminous concrete	252,202.70	255,334.39	53,380.62	*	560,926.71
c	D 238-3	Md. 307	East New Market to Hurlock	Relocating poles	8,261.63	1,795.53	368.60	*	10,425.76
a	D 238-6	Md. 307	East New Market to Hurlock	Payment to contractor for removed pavement beyond the quantity allowed on the final estimate			12,197.54		12,197.54
8-11-55 c	Ce 356-10		Joe Meltz Road and Eger Price Road south of Warwick	1.326 mi. maintenance and surface treatment		5,272.81		*	5,272.81
8-3-55 c	Q 321X-2	Md. 313	Md. 300 to a point .132 mi. from Md. 313	Widening and installation of drainage system	18,386.24			*	18,386.24
7-20-55 c	B 57-8-30		Baltimore-Harrisburg Expressway from Bunker Hill Road to east of Gunpowder Falls	Acquisition of right-of-way	86,105.00	11,133.73	2,609.62	5,151.65	103,000.00
7-20-55 c	M 485-18	U. S. 240	D. C. line to east of Pyle Road	Acquisition of right-of-way	21,47.50	202,555.98	66,334.72	*	271,008.20
7-20-55 c	M 485-27	U. S. 240	Pyle Avenue from River Road to Goldshoro Road; Massachusetts Avenue from D. C. line to Goldshoro Road	Acquisition of right-of-way	47,653.19	1.08	622.90	1,722.53	30,000.00
7-20-55 c	M 485-28	U. S. 240	Wisconsin Avenue to Connecticut Avenue	Acquisition of right-of-way	160,061.41	5,637.28	14,515.63		180,234.32
7-20-55 c	M 485-33	U. S. 240	Tuckerman Lane to Wisconsin Avenue	Acquisition of right-of-way	2,584.37	1,607,163.85	309,300.15	*	1,919,057.37
7-15-55 c	B 700X		Intersection of Md. 372 and Beechfield Avenue	Conversion of existing traffic signal to full actuated	1,718.87		836.35	*	2,615.82
7-15-55 c	SM 319X	Md. 5	Between Confederate Monument and Point Lookout	Repair damage by storms	806.68	173.80		1,804.46	2,875.00
6-23-55 d	F 537-17								
	F 537-18								
	CI 308-7								
5-19-55 d	BRB 428	U. S. 40	East of Ridgeville to Monocacy River Chesapeake Bay Bridge	12.263 mi. 2nd stage resurfacing—spec. "B" Replacement of stone riprap around concrete bridge abents and stone riprap slope protection	806,612.36	86,639.80		*	893,252.25
5-11-55 d	M 383-24	U. S. 240	.2 mi. south of Clarksburg Road northwesterly to .45 mi. south of the Frederick-Montgomery County line	Relocating poles	163,982.26			3,219.00	3,219.00
5-11-55 d	M 512X								
2-28-55 d	AA 263-27	Md. 450	Intersection of Md. 320 and Md. 391 Md. 2 to Md. 393 at Parole	Installation of fully actuated traffic signal	5,183.10	101,260.67	9,760.23	11,036.71	5,183.10
2-28-55 d	BRB 427		Chesapeake Bay Bridge	431 mi. grading, drainage, surfacing and resurfacing—spec. "B"	91,866.53				243,924.11
2-3-55 d	B 635-74		Interchange at Charles Street Avenue extended on Baltimore County Beltway; Bridge to carry Charles Street extended over Baltimore County Beltway	Labor, materials and equipment for additional construction to Administration Building	46,765.01			*	46,765.01
1-21-55 d	Cb 303X	Md. 5	2 mi. west of Hughesville	1.763 mi. grading, drainage and surfacing—reinforced concrete and spec. "B"; construction of 4-span steel I-beam bridge	639,148.05	257,405.43	74.37	*	896,627.85
1-21-55 d	Ho 275X-2	Md. 103	Md. 175 to U. S. 1	Establish picnic area	3,119.57			128,700.00	3,119.57
1-21-55 d	M 540		Intersection of Md. 410 and Md. 97	Construct 4 ft. bituminous and 6 ft. gravel shoulders					128,700.00
1-5-55 d	AA 499X		Glen Burnie Train Highway and Annapolis Blvd.	Right-of-way adjustment	258.05			*	258.05
12-21-51 d	AA 428X-4	Md. 751	North of Owings	Relocating traffic signal pole	531.94	563.12		*	350.00
12-15-51 d	AW 658			Right-of-way adjustment	180,019.95	22,369.03	10,040.88	236,536.71	1,128.36
				To encumbr amount turned over to S.R.C. by Fidelity-Baltimore National Bank & Trust Co. from CJB.B. Construction fund per agreement of October 1, 1948					58,553.59

GENERAL CONSTRUCTION AND OPERATING FUND
PROGRAM PRIOR TO JULY 1, 1954, FUND—STATEMENT OF PROJECT EXPENDITURES
FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

DATE AUTHORIZED	PROJECT NUMBER	ROUTE NUMBER	LOCATION	DESCRIPTION	WORK IN PROGRESS JULY 1, 1956	EXPENDITURES		AUTHORIZED TO COMPLETE PROJECTS IN PROGRESS JUNE 30, 1958	TOTAL
						FISCAL YEAR 1957	FISCAL YEAR 1958		
12-15-54 d	AW 659		Toll bridge crossing Potomac River in Washington, D. C.	Engineering study by Wilber Smith and Associates			5,000.00	5,000.00	
12-9-54 d	P 391-18	Md. 5	Clinton to T. B.	Acquisition of right-of-way	113,880.82	2,032.47	1,306.31	116,010.03	
12-2-54 d	F 557-13	U. S. 40	Bridge over Monocacy River near Frederick	Construction of 3-span structural steel super-structure and concrete floor	346,471.46	31,079.37	*	380,551.03	
12-2-54 d	P 721-2	Md. 193	Colesville Road to east of U. S. 1 on Greenbelt Road	2.39 mi. grading, drainage, and surfacing—spec. "B"; acquisition of right-of-way	1,451,717.97	219,721.37	*	1,674,430.83	
e	P 721-6	Md. 193	Colesville Road to east of U. S. 1 on Greenbelt Road	Relocating water main			1,736.16	1,736.16	
d	P 721	Md. 193	Colesville Road to east of U. S. 1 on Greenbelt Road	Preliminary engineering	15,116.48	117.96	*	15,657.67	
11-26-54 d	B 635-31		Bridge to carry Charles Street extended over Baltimore County Beltway	Construction of steel beam bridge	224,159.09	26,972.50	*	251,131.59	
11-19-54 d	Ho 283X	Md. 99	U. S. 40 to U. S. 29	Right-of-way adjustment	511.78	36.67	*	511.78	
10-7-54 d	M 485-10		Brown Station Road relocation including interchange on Washington National Pike	Acquisition of right-of-way	132,737.21			133,603.01	
9-17-54 d	B 578-28		Baltimore-Harrisburg Expressway from south of Md. Carnel Road to north of Bunker Hill Rd.	Acquisition of right-of-way	150,050.57	6,943.37		156,411.19	
9-1-54 d	AA 490X		Intersection of Md. 2 and Md. 450	Installation of fully actuated traffic signal	3,290.02			4,500.00	
9-1-54 d	E.S. 231		Bridges over Baltimore-Harrisburg Expressway and the Baltimore County Beltway	Engineering services of Rummel, Klepper and Kahl	56,785.81	56,335.21	1,209.98	81,649.29	
9-1-54 d	AW 651		Bridge to carry Md. 193 over Paint Branch	Continuation of research and development work by Johns Hopkins University for 1 year from 6-30-54	7,500.00		*	7,500.00	
8-6-54 d	P 721-1		East of Kent Narrows to Grasonville; Grasonville to south of Stevensville	Construction of dual steel beam bridges	122,700.07		*	122,700.07	
8-6-54 d	Q 278X-1	Md. 18	.5 mi. north of Stevensville	Acquisition of right-of-way	219.03		*	219.03	
7-28-54 d	M 485-16	U. S. 210	North of Md. 189 to north of Tuckerman Lane	Acquisition of right-of-way	285,182.17	18,085.08		355,377.71	
7-20-54 d	A 448		Frederick Street, Cumberland, Md.	Construction of 1-429 mi. concrete curbing, storm water sewers and reinforced concrete pavement	595,221.72	23.01	*	595,244.73	
7-20-54 d	B 635-26		Bridge over Northern Central Branch south of Secondary Avenue on Baltimore County Beltway	Construction of three span steel beam bridges	263,640.51	4,800.17	*	298,787.47	
b	B 635-90		Bridge over Northern Central Branch south of Secondary Avenue on Baltimore County Beltway	Resurfacing approaches to bridge—spec. "B"		1,563.15	*	1,563.15	
7-14-54 d	M 485-17	U. S. 210	North of Tuckerman Lane to north of River Rd.	Acquisition of right-of-way	30,734.54	3,563.20	50,646.33	100,000.00	
7-2-54 d	B 635-4		Baltimore County Beltway from 3 mi. north of Baltimore City line to 42 mi. east of U. S. 111	1.846 mi. grading, drainage, and surfacing—reinforced concrete; acquisition of right-of-way	2,025,923.23	294,037.87	*	2,293,529.67	
6-29-54 d	Q 108-36		Md. 405 west of Price to Md. 300 west of Dudley Corners	Acquisition of right-of-way	65,711.55	69.88	1,996.06	68,009.20	
6-29-54 d	E.S. 209		East New Market to Hurlock	Engineering services of Clarke Gardner and Percy Sterling	11,682.81		*	13,217.09	
6-24-54 d	AA 263-29		Intersection of Md. 2 and U. S. 50	Installation of highway lighting poles	3,956.63	414.52	*	4,371.15	

6-24-54 d	F 490-5	Frederick By-pass from north of U. S. 40 and west to intersection with Alternate U. S. 40	Acquisition of right-of-way	616,842.35	202,282.81	9,305.42	828,430.58
6-24-54 d	F 490-12	Frederick By-pass from U. S. 40 to north of M other Avenue	Acquisition of right-of-way	24,151.30	133,748.08	310,714.77	468,614.15
6-24-54 d	M 485-9	Shady Grove Road to north of Md. 189	2.85 mi. grading, drainage, and surfacing—spec. "B"; acquisition of right-of-way	482,679.16	35,203.45	9,164.79	527,047.40
6-24-54 d	Q 168-26	Eastern Shore Boulevard from .15 mi. northeast of U. S. 213 to .09 mi. northeast of Md. 305	Acquisition of right-of-way	82,791.16	415.40	1.07	83,207.63
6-9-54 d	G 254	Bridge over Potomac River at Kitzmiller	Preliminary engineering	10,417.68		*	10,417.68
5-25-54 d	AA 262-18	North shore of Dorsey Creek to south shore of Weems Creek	9.66 mi. grading, drainage, and surfacing—reinforced concrete; acquisition of right-of-way	734,524.25	4,447.03	3,297.88	742,269.16
5-24-54 d	Q 168-33	Eastern Shore Boulevard from .09 mi. northeast of Md. 305 to .53 mi. northeast of Md. 405	Acquisition of right-of-way	128,792.95	146.45	181.74	130,222.58
5-18-54 d	Q 168-45	Eastern Shore Boulevard from Centreville to Kent County line	Preliminary engineering			56.84	6,500.00
5-12-54 d	F 576	Md. 32 to Pa. State line	Share of cost for road construction	196.18	184.81		4,000.00
5-12-54 d	E.S. 203	Bridge over Belfast Road, Cold Bottom Road, Mount Carmel Road and Bunker Hill Road on Baltimore-Harrisburg Expressway	Engineering services of D. B. Steinman	16,975.05	132.75	264.42	21,961.75
4-29-54 d	AA 368X-24	Baltimore-Washington Expressway north of Dorsey to north side of Hanover Road	Repair seeded-mulched areas	5,970.91		*	5,970.91
4-29-54 d	AA 368X-25	Baltimore-Washington Expressway .46 mi. south of Jessup Road northeasterly to .31 mi. north of Jessup Road	Repair seeded-mulched areas	7,332.60		*	7,332.60
4-21-54 d	F 490-2	Frederick By-pass from U. S. 15 toward U. S. 340	Preliminary engineering and acquisition of right-of-way	171,138.09	20,854.71	12,348.87	204,341.67
4-14-54 d	Ho 258-2	Md. 144 at Ellicott City northerly to U. S. 40	1.02 mi. grading, drainage, widening, and surfacing—spec. "B"; acquisition of right-of-way	295,545.79		40,244.76	335,790.55
3-30-54 d	A 463	Bridge over Potomac River at Wiley Ford	Preliminary engineering	465.13	279.07		1,000.00
3-30-54 d	K 188-4	Eastern Shore Boulevard 1.69 mi. southwest of Md. 313 northeasterly to Delaware State line	Acquisition of right-of-way	101,890.60	42,001.40	21.94	143,922.94
3-30-54 d	Q 168-38	Blue Star Memorial Highway from 1.16 mi. southwest of Md. 544 to 1.69 mi. southwest of Md. 313	Acquisition of right-of-way	81,568.90	4,611.83	61.79	86,242.52
	K 188-17	Blue Star Memorial Highway from 1.16 mi. southwest of Md. 544 to 1.69 mi. southwest of Md. 313	Relocating poles			8,990.96	8,990.96
	Q 168-55	Blue Star Memorial Highway from 1.16 mi. southwest of Md. 544 to 1.69 mi. southwest of Md. 313	Acquisition of right-of-way				
3-30-54 d	M 485-7	Eastern Shore Boulevard from .08 mi. northeast of Md. 300 to 1.16 mi. southwest of Md. 544	Acquisition of right-of-way	98,251.38	82,818.60	41,419.80	250,000.00
3-30-54 d	Q 168-37	Eastern Shore Boulevard from .08 mi. northeast of Md. 300 to 1.16 mi. southwest of Md. 544	Acquisition of right-of-way	43,558.01	378.44		43,936.45
	Q 168-57	Relocation of Md. 166 and Bloomsbury Road	Relocating poles			246.69	246.69
2-25-54 d	B 637-2	Bridge over Patuxent River near Elbridge	Acquisition of right-of-way		5,113.36		5,113.36
2-18-54 d	B 675	Walters Run at Md. 7	Installation of one steel street lighting pole	52.31	105.52		157.83
2-18-54 d	Ho 276	Washington National Pike from B. & O. R.R. to Shady Grove Road	Preliminary engineering	625.87		*	625.87
2-18-54 d	M 485-5	2 mi. north of Brunswick	Acquisition of right-of-way	293,658.39	2,198.18	1,527.13	300,380.70
1-27-54 d	F 569X		Establish picnic area	4,701.73		*	4,701.73

EXHIBIT K—Continued

**GENERAL CONSTRUCTION AND OPERATING FUND
PROGRAM PRIOR TO JULY 1, 1954, FUND STATEMENT OF PROJECT EXPENDITURES
FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958**

Date Authorized	Project Number	Route Number	Location	Description	Work in Progress April 1, 1956	EXPENDITURES		Authorized to Complete Projects in Progress June 30, 1958	Total
						Fiscal Year 1957	Fiscal Year 1958		
1-27-54 d	M 185-3	F, S, 210	.25 mi. south of Md. 118 to 1 mi. north of Gaithersburg	Acquisition of right-of-way	115,755.26	110.12		115,865.38	
1-27-54 d	E-8, 173		Connection of University Lane and Baltimore-Washington Blvd. in vicinity of University of Md.	Engineering services of Whitman, Reynolds and Associates	52,901.21	2,151.05	*	55,052.26	
12-23-53 d	F 357-2	F, S, 40	.5 mi. west of Md. 27 near Ridgeville to .6 mi. west of Pine Four	2,636 mi. grading, drainage, and surfacing bituminous concrete	1,161,733.20	69.95	*	1,161,793.15	
d	F 357X-22	F, S, 40	.5 mi. west of Md. 27 near Ridgeville to .6 mi. west of Pine Four	Correct damage by frost boils	29,610.80		*	29,610.80	
12-23-53 d	P 391-10	Md. 5	Woods Corner to Clinton	1.216 mi. grading, drainage, and surfacing reinforced concrete; acquisition of right-of-way	1,395,518.55	26.72	*	1,395,545.27	
c	P 391-20	Md. 5	Woods Corner to Clinton	Refracting poles	1,100.00		*	1,100.00	
12-10-53 d	B 635-31		Baltimore County Beltway from Joppa Road to Baltimore-Harrisburg Expressway. Connection; Baltimore County Beltway to Baltimore-Harrisburg Expressway at Timonium	2,331 mi. grading, drainage, and surfacing reinforced concrete	792,380.79	1,100.00	*	792,380.79	
12-2-53 d	B 635-22		Bridge over Thornton Road on Baltimore County Beltway 2 mi. south of Md. 131	Construction of triple span I-beam bridge and approaches	119,070.90		*	119,070.90	
11-12-53 d	B 578-20		Baltimore-Harrisburg Expressway from Belfast Road to 1 mi. south of Mt. Carmel Road	Acquisition of right-of-way	66,771.69	113.11	6.96	66,892.09	
11-12-53 d	W 416-8	Md. 60	4 mi. north of Hagerstown to Leesburg	Refracting poles	2,167.13		*	2,167.13	
10-28-53 d	AW 652X		Baltimore-Washington Expressway	Installation of directional signs in Baltimore City	1,025.10		*	1,025.10	
10-21-53 d	F 537-10	F, S, 40	.1 mi. east of Jansville Road westerly to .25 mi. east of Monocacy River	2,355 mi. grading, drainage, and surfacing bituminous concrete	774,772.92	89,053.48	108.18	864,566.58	
d	F 537X-25	F, S, 40	.4 mi. east of Jansville Road westerly to .25 mi. east of Monocacy River	Correct damage by frost boils	36,910.65		*	36,910.65	
d	F 537X-16	F, S, 40	.4 mi. east of Jansville Road westerly to .25 mi. east of Monocacy River	Right-of-way adjustment	507.53		*	507.53	
9-30-53 d	A 158		Intersection of Orleans Road at Piney Grove	Acquisition of right-of-way	2,339.01		*	2,339.01	
9-2-53 d	P 568X		Intersection of Queensburg Road and U. S. 1 in Riverdale	Improvement to intersection	499.22	1,408.26	*	1,907.48	
8-19-53 d	B 635-3		Baltimore County Beltway from Falls Road to Pa. R.R.; Baltimore County Beltway to Timonium Road on Baltimore-Harrisburg Expressway	Acquisition of right-of-way	250,175.86	23,613.23	5,997.00	298,122.09	
7-29-53 d	B 635-23		Baltimore County Beltway from Patapsco River to U. S. 40	Acquisition of right-of-way	592,065.38	113.79	18.20	593,097.37	
7-23-53 d	Wo 310X-2	F, S, 113	Berlin to Delaware line	Construction of 8.2 miles earth shoulders; seed and mulch slopes and shoulders	294,516.19	19,136.70	*	313,652.89	
b	Wo 310X-1	F, S, 113	Station 75 on Stony Creek Road (Md. 173)	Acquisition of right-of-way	2,598.91	51.08	2,110.60	1,793.62	
6-30-53 d	AA 262X-3		Intersection of U. S. 40 and Race Road, 2 mi. north of Golden Ring	Right-of-way adjustment	12.11	250.80	*	262.91	
5-28-53 d	B 661X		Relocation of River Road and Edmonston Road	Installation of semi-actuated traffic signal	102.20	514.67	2,683.13	3,300.00	
4-29-53 d	P 724-1		Bridge over Potomac River at Brunswick	Preliminary engineering	950.78	573.10	251.61	7,500.00	
1-29-53 d	F 507-4			Construction of deck steel plate girder bridge superstructure	1,488,188.83		*	1,488,188.83	

d	F 507-5		Bridge over Potomac River at Brunswick	Construction of concrete deck and bituminous surfacing	355,942.55	456.39	355,386.94
d	F 507-8		Bridge over Potomac River at Brunswick	Relocating sewer line during construction of bridge	542.02		544.64
d	F 507-1		Bridge over Potomac River at Brunswick	Preliminary engineering	732.78		12,126.63
1-23-53 d	AA 388-4		Glen Burnie through Harmons	Acquisition of right-of-way			1,000.00
1-14-53 d	E.S. 151		New Midway to Woodsboro	Engineering services of Green Associates, Inc.	15,437.60		15,437.60
1-6-53 d	F 724-2		Bridge over B. & O. R.R. near Kenilworth	Construction of single span concrete bridge; acquisition of right-of-way	21,323.19	307.52	271,427.41
10-15-52 d	M 485-1		Md. 118 toward D. C. line	Acquisition of right-of-way	60,200.12	9.00	59,982.91
c	M 485		Md. 118 toward D. C. line	Preliminary engineering	24,500.60	22,182.63	60,164.10
9-23-52 d	B 656		Predant northwesterly toward U. S. 111	Preliminary engineering	327.16	15.64	1,107.20
7-23-52 d	SM 296X		1.5 mi. north of Hollywood	Establish picnic area	8.14		306.66
7-23-52 d	SM 298X		Md. 5 at Point Lookout	Establish picnic area	45.85		491.50
7-23-52 d	SM 299X		Md. 5 near St. Mary's City	Establish picnic area			345.00
7-23-52 d	SM 290X		Baltimore City line to Jacobsville	Acquisition of right-of-way	157.75		412.75
7-23-52 d	AA 380-2		Mellery to intersection of U. S. 219 and Hoyes Road	Preliminary engineering	1,196.18		3,543.26
6-26-52 d	G 155-9				580.35	3,723.89	263.68
6-18-52 d	C 308-2		Baltimore National Pipe between South Branch of Patapsco River and Md. 27 at Ridgeville	Preliminary engineering	149.49		17,450.00
5-7-52 d	P 696		Federick Bypass	Preliminary engineering and survey for illumination study	177,911.70		119.49
4-30-52 d	F 604-24		Intersection of Md. 26 and Md. 71 at Cressville	Acquisition of right-of-way	15,290.52	12,918.87	206,130.48
4-30-52 d	F 525		Landover Road—east and west of Baltimore-Washington Expressway	Preliminary engineering	3,248.63		636.71
4-30-52 d	K 188		Bay Bridge approach through Cecil County from County line to Warwick	Preliminary engineering	3,340.01		31,240.00
4-30-52 d	P 663		Northwest branch of Patapsco River, Snowden Creek, Morgan Run	Preliminary engineering	7,285.97	11.39	3,501.58
4-28-52 d	Cc-356				305,396.82	988.35	17,450.00
3-26-52 d	AA 255-20		Bridge over Little Elk Creek at Elkton	Preliminary engineering to study plans for new bridges and approaches in areas affected by high water	8,382.37		306,655.08
3-26-52 d	W 422		Streams, Baylett to Clearspring	Preliminary engineering	22.52		8,382.37
3-19-52 d	M 500		Montgomery and Prince George's Counties	Widening bridge—preliminary engineering	1,751.76		
3-19-52 d	P 711			Salaries, expenses, and purchase of plats in connection with the obtaining of prints of all subdivisions and dedications	5,616.46		
3-26-52 d	Cc-358-1						22.52
3-26-52 d	W 422						1,751.76
3-19-52 d	P 711						5,616.46
3-12-52 d	AW 612		Md. 118 to D. C. line	Purchase lien for B-W prints of right-of-way plats for filing in various counties	11,007.44	262.75	11,270.19
2-19-52 d	E.S. 150		Padaski Highway—Baltimore-Washington Expressway on Baltimore County Beltway	Engineering services of Wilson T. Ballard Co.—Joseph E. Knoerle	1,085,640.90	22,522.43	1,063,118.17
2-19-52 d	E.S. 151		Ridgeville toward Frederick	Engineering services of Joseph K. Knoerle, Rummet, Klepner and Kahl and Baker—Wibberley Co.	979,190.85	30.99	980,500.00
2-11-52 d	F 537		Bridge over Patuxent River at Benedict	Employ Alster & Associates to make a location study and provide social mosaic and topographic map	5,321.74		5,321.74
11-11-51 d	C 184-5 Ch. 255-5		Baltimore County Beltway	Purchase furniture and fixtures for Administration Building	4,885.14		614.86
10-17-51 d	B 635		Hagerstown toward Chewsville	Personnel used in connection with right-of-way acquisitions	19,476.23	153.22	19,629.45
6-21-51 d	W 405			2,971 mi. grading, drainage, widening, surfacing and resurfacing—bituminous concrete	582,336.68	30,080.47	583,185.60

EXHIBIT K - Concluded

GENERAL CONSTRUCTION AND OPERATING FUND
PROGRAM PRIOR TO JULY 1, 1954 FUND - STATEMENT OF PROJECT EXPENDITURES
FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

DATE AUTHORIZED	PROJECT NUMBER	ROUTE NUMBER	LOCATION	DESCRIPTION	EXPENDITURES			AUTHORIZED TO COMPLETE PROJECTS IN PROGRESS JUNE 30, 1958	TOTAL
					WORK IN PROGRESS JULY 1, 1956	FISCAL YEAR 1957	FISCAL YEAR 1958		
6-18-51 d 2-27-51 d	F 557-1 AA 368-0	U. S. 40	Md. 27 at Ridgeville to Jug Bridge Baltimore-Washington Expressway from .3 mi. north of the Jessup Road southeasterly to .32 mi. south of Dorsey Road	Preliminary engineering 2,656 mi. grading, drainage, and surfacing—rein- forced cement concrete	79,369.02 891,419.58	535.04 208.01	142.31 382.42	80,046.37 892,020.01	
2-8-51 d 11-29-50 d 11-1-50 d 9-27-50 d 4-5-50 d 2-5-50 d 12-28-19 d	H 340X-1 AA 263-11 H 316-1 P 687X AW 602-1 H 83-1 P 391-2 Ch 257-1	Md. 161 Md. 2 Md. 22 Md. 410 Md. 5 U. S. 301	Deer Creek Bridge Ritchie Highway Bel Air to Churchville Ager Road near Green Meadows Washington metropolitan area Blackhorse to Jarrettsville Road at Madonna	Preliminary engineering Engineering services of J. E. Greiner Co. Acquisition of right-of-way Construction of manholes Continuation of transportation study Acquisition of right-of-way	79.68 232,057.17 5,469.80 1,927.20 92,866.30	207.45 9,140.90		79.68 232,037.17 5,677.35 1,927.30 102,007.20 278.20	
12-21-49 d 6-1-49 d	F 425-5 P 655	U. S. 210	T. B. to .274 mi. south of Charles County line . Bridge over Monocacy River Intersection of Riggs Road (Md. 212) and Ager Road (Md. 410)	3,388 mi. grading, drainage, and surfacing—bitumi- nous concrete Construction of bridge Installation of pipe and manhole	1,569,716.73 747,115.53 115.10	368.26 96,102.39	97,232.20	1,722,513.82 833,217.92 3,423.60	
12-7-48 d	B 578-2	U. S. 111	Tinnonium toward Marble Hill Road	4,124 mi. grading and drainage—reinforced cement concrete	1,105,155.42	567.24	1,018.56	1,106,741.22	
4-7-48 d 2-10-48 d 7-2-46 d 7-2-46 d	P 631-1 AA 380-1 AA 391X-1 P 301 P 510 Ho 215 F 425	U. S. 50 Md. 416 Md. 5	D. C. line to U. S. 301 Waysons Corner to Calvert County line Silver Hill to T. B.	Preliminary engineering Surveys, plans, quantities—for widening Preliminary engineering	77,828.31 2,386.66 59,965.77	8,024.92 321.28	4,218.17 81.39	90,971.40 2,396.66 60,368.44	
12-14-43 d	M 323	U. S. 240	Bridge over Patuxent River at Laurel Rockville to Monocacy River enroute to Fred- erick	Preliminary engineering	2,042.04	5.11		2,042.04	
c	BRB 430		Chesapeake Bay Bridge	Preliminary engineering To improve the facilities at connection to Old U. S. 50 in compliance with plans of J. E. Greiner Co. Modification to toll recording equipment by the installation of individual power packs for each toll lane	33,165.14 4,236.13	249.23	1,994.92	33,170.25 4,236.13 2,244.15	

	Various	Costs incurred after project closing	Recoveries effected after project closing	Miscellaneous		*	
e	3,538.25	52,671.43	18,246.67			*	74,456.38
c	87,257.52	7,158.26	7,158.26			*	63,498.78
c	116,518.22	84,989.65	32,238.27			*	
	TOTAL	\$28,471,182.55	\$2,307,490.40				\$37,297,159.51
SUMMARY							
a		\$ 21.42	\$ 380,012.55		\$	\$ 308,187.73	507,531.70
b		195,075.41	516,482.08			111,458.17	356,161.56
c		3,288,262.07	813,084.92			232,408.40	5,536,691.90
d	\$ 1,203,223.81	1,967,105.61	605,104.89			603,390.35	30,319,457.20
e	27,143,638.14	117,619.78	174,174.94				12,472.12
	TOTAL	\$28,471,182.55	\$ 5,332,814.73				\$37,297,159.51

* Indicates completed projects.
Italics indicate red figures.

GENERAL CONSTRUCTION AND OPERATING FUND
 TWELVE-YEAR ROAD CONSTRUCTION PROGRAM FUND SUMMARY OF AUTHORIZED EXPENDITURES
 AND ACTUAL EXPENDITURES, BY DISTRICTS AND BY COUNTIES, TO JUNE 30, 1958

COUNTY	PRIMARY PROGRAM										SECONDARY PROGRAM									
	CONSTRUCTION					AUTHORIZED EXPENDITURES					CONSTRUCTION					AUTHORIZED EXPENDITURES				
	MILES	AMOUNT	ENGINEERING	ADMINISTRATIVE AND GENERAL	REQUESTS-ROADWAY	TOTAL	EXTENDED EXPENDITURES	MILES	AMOUNT	ENGINEERING	ADMINISTRATIVE AND GENERAL	REQUESTS-ROADWAY	TOTAL	ACTUAL EXPENDITURES	TOTAL AUTHORIZED EXPENDITURES					
District No. 1:																				
Dorchester	3.45	\$ 100,239	\$ 53,505	\$ 28,702	\$ 175,180	\$ 182,199	\$ 182,199	15.01	\$1,611,689	\$ 167,840	\$ 117,719	\$ 101,817	\$2,392,086	\$4,003,513	\$ 2,871,855					
Harford	11.31	1,477,334	831,206	313,728	5,998,208	5,998,208	1,031,152	19.33	510,063	33,531	33,281	12,307	571,510	582,784	6,392,808					
Somerset	11.26	1,892,530	383,010	135,116	3,638,316	6,019,350	6,021,350	16.17	1,117,276	125,653	176,581	397,318	1,791,287	1,786,511	7,780,822					
Worcester	28.58	5,392,458	533,206	348,147	11,181,189	7,121,476	5,343,917	11.28	752,812	82,103	98,033	71,939	903,591	828,811	8,062,237					
District No. 2:																				
Caroline	16.11	1,079,587	126,106	79,917	1,653,390	1,751,871	1,616,351	25.47	1,314,020	202,191	105,169	314,211	1,991,537	1,185,366	3,712,738					
Cecil	10.16	1,298,275	1,200,275	150,249	198,633	2,181,199	2,171,778	21.78	2,195,239	357,511	18,188	81,137	3,818,116	3,084,161	6,639,535					
Kent	14.80	2,817,304	319,311	176,846	115,719	3,129,161	3,308,108	12.68	619,031	17,020	183,292	133,560	1,884,181	1,281,262	4,841,181					
Queen Anne's	21.06	3,892,491	414,836	143,376	8,971	4,129,617	1,027,451	20.49	1,057,315	128,511	83,194	265,581	1,499,265	5,867,277	6,129,300					
Talbot			11,963	837	73,000	91,800	15,133	22.39	1,610,957	133,023	111,518	353,229	2,211,169	1,873,727	2,306,266					
District No. 3:																				
Montgomery	13.10	23,191,281	3,613,921	1,777,411	7,456,180	35,398,106	28,692,950	21.57	3,122,500	159,927	205,739	58,152	4,365,779	4,318,786	40,701,275					
Prince George's	42.06	16,418,417	3,395,191	994,924	5,755,968	26,533,693	21,822,305	18.50	7,191,549	1,103,149	192,271	2,767,273	11,997,533	11,101,761	38,361,133					
District No. 4:																				
Baltimore	33.75	26,945,692	1,099,148	1,907,078	9,028,125	11,950,253	27,012,259	21.75	5,705,700	625,593	375,901	921,089	7,630,283	6,427,611	49,690,536					
Harford	8.69	1,325,045	1,115,385	510,231	3,115,826	3,079,811	3,079,811	18.62	2,129,953	121,913	195,892	411,089	3,871,391	3,351,178	7,020,133					
District No. 5:																				
Anne Arundel	39.20	10,191,631	932,287	632,631	2,830,892	14,877,177	12,957,750	29.47	7,102,287	213,539	68,312	152,211	11,533,462	11,779,132	16,039,939					
Chesapeake	11.91	882,120	138,383	67,716	361,370	1,295,019	1,343,514	13.56	5,091,549	72,122	118,399	219,216	843,056	745,729	2,271,975					
Charles	30.22	2,168,288	301,128	122,391	251,992	2,810,099	2,343,153	33.11	2,091,621	310,883	157,270	933,179	3,181,388	2,689,011	6,378,397					
St. Mary's	12.13	1,176,839	183,210	78,340	620,880	2,050,239	2,085,091	25.37	1,764,449	227,992	126,153	424,509	2,548,034	1,096,438	3,691,529					
District No. 6:																				
Allegany	16.91	6,688,697	1,189,813	891,211	1,831,928	10,200,682	7,392,181	9.70	2,178,782	299,253	158,920	118,169	3,016,124	2,721,000	13,226,106					
Washington	15.50	2,583,176	353,228	183,831	318,831	3,099,359	2,280,140	15.98	3,518,234	351,835	249,758	326,510	4,176,337	2,735,471	7,915,666					
District No. 7:																				
Carroll	22.77	2,106,050	279,811	138,228	536,181	3,159,016	2,562,855	17.18	2,650,510	229,396	123,396	811,694	4,512,311	2,187,359	7,692,926					
Frederick	28.14	9,107,116	1,152,161	629,533	1,725,290	11,351,619	8,742,511	13.11	1,559,708	265,367	113,797	385,398	2,297,470	1,830,189	13,652,119					
Howard	11.71	1,051,551	118,018	76,691	139,934	1,386,137	1,327,661	9.19	676,616	152,981	58,698	519,387	1,407,682	1,370,631	2,793,819					
TOTAL CONSTRUCTION PROJECTS (Schedule 1)	451.61	\$133,891,610	\$21,463,927	\$9,298,105	\$38,190,417	\$292,816,759	\$168,102,978	653.01	\$32,104,133	\$7,231,613	\$3,752,298	\$13,453,983	\$76,511,067	\$62,581,077	\$279,389,826					
EMERGENCY CONSTRUCTION AND RECONSTRUCTION (Schedule 2)																				
INTERSTATE PROJECTS NOT IN TWELVE-YEAR PROGRAM (Schedule 3)	7.02	493,887	46,008	31,761	68,600	610,229	589,392	1.11	29,512	19,536	3,051	5,732	57,831	9,135	698,063					
TOTAL	458.63	\$134,388,312	\$23,298,222	\$9,437,753	\$38,890,017	\$293,633,394	\$176,689,107	654.18	\$32,133,645	\$7,251,179	\$3,755,349	\$13,463,815	\$76,601,991	\$62,633,212	\$282,535,295					
			2,845	107,884	550,000	2,147,316	925,827								2,417,316					
															925,827					

Note—The amount required at June 30, 1958 to complete authorized projects is \$96,103,659, determined as follows:
 Authorized Expenditures (Authorizations \$282,966,178, less net adjustments shown by Certificates of Expenditure covering closed projects \$139,973)
 Project Overruns, Preliminary Costs, Etc., Subject to Additional Authorizations \$96,103,659

EXHIBIT L, Schedule 1

GENERAL CONSTRUCTION AND OPERATING FUND

TWELVE-YEAR ROAD CONSTRUCTION PROGRAM FUND—STATEMENT OF AUTHORIZED EXPENDITURES AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958

PRO-GRAM REFERENCE (PAGE-LINE)	ROUTE NUMBER	LOCATION	DESCRIPTION	AUTHORIZED EXPENDITURES						ACTUAL EXPENDITURES	
				CONSTRUCTION	ENGINEERING	ADMINISTRATIVE AND GENERAL	RIGHTS-OF-WAY	TOTAL	(Final Cost)		
				MILES	AMOUNT						
DORCHESTER COUNTY (District No. 1)											
3-1	U. S. 50		Resurface Spec. "B" Present Lane	2.55	\$ 89,757	\$ 7,402	\$ 7,287			\$ 104,446*	\$ 104,446
3-2	U. S. 50		Add Second Lane	3.45	\$ 310,475	46,103	21,475			378,053*	378,053
			TOTAL	3.45	\$ 400,232	\$ 53,505	\$ 28,762			\$ 482,499*	\$ 482,499
5-2	Md. 16		Modify Curves, Widon 27', and Resurface	4.74	\$ 536,702	\$ 58,511	\$ 39,536	\$ 171,129		\$ 805,878	\$ 802,690
5-3	Md. 331		Modify Curves, Widon 24', and Resurface	2.00	116,843	4,815	7,894	28,831		158,413*	158,413
5-1	Md. 331		Shiloh Church to Hurlbuck	2.91	180,812	9,336	11,715	28,985		230,848*	230,848
5-5	Md. 331		Hurlbuck to Md. 319, Caroline County Lane			30,659	2,146	5,000		37,805	37,887
5-8	Md. 16		Church Creek to Taylor's Island	2.28	424,898	36,295	31,759	192,902		685,851	697,000
5-10	Md. 343		3.2 Mile W. of Cambridge to Hudson	3.11	352,425	28,191	21,669	68,000		470,285	436,705
			TOTAL	15.04	\$ 1,611,680	\$ 167,840	\$ 117,719	\$ 494,847		\$ 2,392,086	\$ 2,063,543
				18.49	\$ 2,011,912	\$ 221,345	\$ 146,481	\$ 494,847		\$ 2,874,585	\$ 2,546,012
SOMERSET COUNTY (District No. 1)											
7-1	U. S. 13		Connection Pocomoke By-Pass E. of P.R.R. to Md. 364 (New); Maryland 364 to Pocomoke River Bridge	0.69	\$ 250,120	\$ 20,656	\$ 18,074	\$ 4,000		\$ 301,850	\$ 263,046
7-2	U. S. 13		Dual Highway—Utilize Present Road	4.90	1,351,827	107,164	93,771	287,868		1,840,630	1,927,265
7-3	U. S. 13		Dual Highway—Utilize Present Road			41,490	2,904	15,000		59,394	60,567
7-4	U. S. 13		Acquire Dual R/W; Construct 1 Lane Road, 1 Lane R/R Bridge and 1 st Cost of 1 Lane River Bridge	0.43	1,063,600	92,709	70,887	83,008		1,310,204	563,765
7-5	U. S. 13		Acquire Dual R/W			2,979	208	261,154		264,341	129,113
7-6A	Md. 413 Ext.		Divided Highway and Relocation	1.64	787,255	62,951	55,083	125,000		1,030,289	862,881
7-10	Md. 358		Dual Highway and Bridge over Manokin River	3.65	1,015,532	103,257	72,891			1,191,590	596,515
			TOTAL	11.31	\$ 4,477,334	\$ 431,206	\$ 313,728	\$ 776,030		\$ 5,998,298	\$ 4,403,452
				GRAND TOTAL							

9-1 9-2 9-3 9-4 9-5 9-6 9-7 9-8	Secondary Program Projects: St. Stephens to Dames Quarter Chesapeake Ave. to Maryland Ave. Chesapeake Ave. to Md. 380 Md. 358 to Bridgetown U. S. 13 to Westover Princess Anne to Mt. Vernon Hudson's Corner to Easterly 1 Mile E. of Hudson's Corner to U. S. 13 Dames Quarter to Deals Island Md. 380 to Bridgetown Md. 358 to Sackettown	Resurface Resurface Resurface Widen 22' and Resurface Widen 22' and Resurface Modify Curves, Widen 22' and Resurface Widen 20' and Resurface Resurface (Now County) Widen 21' and Resurface Widen 20' and Resurface Widen 20' and Resurface	2.75 0.57 0.97 1.79 0.64 0.94	\$ 58,808 12,246 20,705 38,276 25,117 19,289	\$ 1,993 115 702 1,297 913 22,430 564	\$ 3,606 751 1,269 2,347 1,625 1,570 1,488	\$ 61,407* 13,412 22,676 41,930 30,431* 25,000 21,341*	\$ 64,107* 13,412 22,676 41,930 30,431* 25,000 21,341*																																																							
																			19.53	\$ 510,163	\$ 35,551	\$ 36,289	\$ 12,507	\$ 564,510	\$ 582,784																																						
																										30.84	\$ 4,987,497	\$ 466,757	\$ 350,017	\$ 788,537	\$ 6,562,808	\$ 4,986,286																															
																			WICOMICO COUNTY (District No. 1)																																												
																			13-1 13-2 13-3 13-4 13-6	Primary Program Projects: Through Salisbury Salisbury to Md. 663 Md. 663 to Somerset County Line E. Limits of Salisbury to Pocomoke River Sharptown to Mardela Springs	Duel Highway—Line "A" Salisbury Report Construct 2nd Lane Widen Existing Road and Construct 2nd Lane S/P and R/W Acquisitions for Dual Highway Modify Curves, Widen 22', and Resurface	0.02 3.40 1.38 6.46	\$ 189,023 946,943 318,900 407,655	\$ 215,063 71,064 21,609 59,700 15,607	\$ 20,334 62,870 18,220 4,179 29,543	\$ 2,596,120 1,965,152 802,301 118,879 536,283*	\$ 2,626,487 2,000,627 781,250 73,693 536,283																																				
																																						11.26	\$ 1,862,530	\$ 383,043	\$ 135,116	\$ 3,638,316	\$ 6,019,635	\$ 6,021,310																			
																																						15-1 15-2 15-4 15-5 15-5A 15-5B 15-6 15-9	Secondary Program Projects: U. S. 50 to Rockwalking School Salisbury to U. S. 13 Pa. R. R. W/Willard to Whifton Tyaskin to Nanotoko End of Contract W1271 to Md. 353 (4.61 Miles) State Street, Delmar U. S. 50 to Delaware Line Md. 663 to Allen	Modify Curves, Widen 24', and Resurface Widen 24' and Resurface Modify Curves, Widen 24', and Resurface Modify Curves, Widen 24', and Resurface Improve Construction (Widen and Resurface) Preliminary Engineering Modify Curves, Widen 22', and Resurface Widen 22' and Resurface	4.31 1.26 4.39 4.20 2.31	\$ 352,223 118,661 266,221 242,236 167,935	\$ 36,968 13,513 21,299 6,889 16,141 2,150 5,697 21,215	\$ 33,577 9,004 18,635 17,663 12,533 150 393 1,485	\$ 567,671* 957,538 506,575 283,161* 203,192 2,500 6,000 25,200	\$ 567,671 1,062,246 563,513 283,161 206,162 4,197 1,825 13,445																	
																																																									16.47	\$ 1,147,276	\$ 123,753	\$ 93,440	\$ 397,318	\$ 1,761,787	\$ 1,786,514
																																																									27.73	\$ 3,009,806	\$ 506,796	\$ 228,586	\$ 4,035,634	\$ 7,780,822	\$ 7,807,854
																																																									GRAND TOTAL						
																			GRAND TOTAL																																												

Exhibit L, Schedule I Continued

**GENERAL CONSTRUCTION AND OPERATING FUND
TWELVE-YEAR ROAD CONSTRUCTION PROGRAM FUND—STATEMENT OF AUTHORIZED EXPENDITURES
AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958**

PRO- GRAM REFERS PAGE (PAGE- LINE)	ROUTE NUMBER	LOCATION	DESCRIPTION	AUTHORIZED EXPENDITURES						ACTUAL EXPEN- DITURES
				CONSTRUCTION AMOUNT	ENGINEER- ING	ADMINIS- TRATIVE GENERAL	REPAIRS-OF- WAY	TOTAL (Original Cost)		
									MILES	
WORCESTER COUNTY (District No. 1)										
17-1	U. S. 50		S. P. and R. W. Acquisition for Dual Controlled Access		\$ 83,031	\$ 5,813	\$ 174,705	\$ 293,540	\$ 135,976	
17-2	U. S. 50		Construct 1st Lane of Dual	1.71	\$ 571,250	\$ 39,092		\$ 617,171	\$ 137,128	
17-3	U. S. 50		Construct Dual Highway	1.18	\$ 196,711	\$ 31,351		\$ 592,681	\$ 119,174	
17-4	U. S. 50		S. P. and R. W. Acquisition for Additional Lane			\$ 18,909	1,235		12,286	
17-5	U. S. 13		S. P. and R. W. Acquisition, Construct 1 Lane and 1/2 River Bridges (1 Lane)	0.18	\$ 762,553	\$ 51,051	\$ 55,710	\$ 911,571	\$ 188,784	
17-6	U. S. 13		Construct 2nd Lane	3.68	\$ 531,700	\$ 27,663	\$ 35,062	\$ 607,418	\$ 607,419	
17-8	U. S. 113		2 1/2 Relocation West of R. R. Tracks	11.11	\$ 2,255,277	\$ 130,892	\$ 417,301	\$ 2,907,415	\$ 3,274,311	
17-9	U. S. 113		Widen 2 1/2, Resurface, Widen Bridge at Nassawango Creek	10.00	\$ 772,093	\$ 66,788	\$ 183,511	\$ 1,078,217	\$ 911,294	
			TOTAL	28.58	\$ 5,392,587	\$ 348,174	\$ 811,189	\$ 7,121,756	\$ 5,346,917	
Secondary Program Projects:										
19-1	Md. 756		Pocomoke to U. S. 113	1.12	\$ 30,355	\$ 1,029	\$ 1,892	\$ 32,216*	\$ 33,216	
19-2	Md. 19		Snow Hill to Virginia Line	2.14	\$ 135,031	\$ 30,056	\$ 69,000	\$ 245,263	\$ 127,216	
19-3	Md. 528		Ocean City to Delaware Line	8.78	\$ 526,781	\$ 21,351	\$ 2,635	\$ 580,068*	\$ 581,002	
19-4	Md. 366		Pocomoke to George Island Landing			\$ 8,311			\$ 4,780	
19-5	Md. 362		U. S. 113 to U. S. 50			\$ 2,211			\$ 7,800*	
19-6	Md. 362		Snow Hill to Public Landing	1.61	\$ 60,612	\$ 1,729	\$ 205	\$ 67,800*	\$ 67,800	
19-6	Md. 365		Snow Hill to Wisconsin County Line			\$ 6,512		\$ 7,900	\$ 3,183	
19-7	Md. 354		Md. 12 to Wisconsin County Line			\$ 7,500		\$ 401	\$ 2,158	
19-6	Md. 610		Relocation to Ebenezer Church			\$ 5,407		\$ 6,000	\$ 789	
			TOTAL	11.28	\$ 752,812	\$ 82,106	\$ 58,653	\$ 71,930	\$ 963,501	\$ 828,811
GRAND TOTAL				12.86	\$ 6,145,399	\$ 618,312	\$ 916,419	\$ 8,087,257	\$ 6,173,764	
CAROLINE COUNTY (District No. 2)										
23-1	Md. 401		2 1/2 Relocation	1.00	\$ 180,000	\$ 14,400	\$ 50,445	\$ 257,145	\$ 266,278	
23-2	Md. 328		Md. 404 to Towshawe Bridge	5.33	\$ 259,862	\$ 24,428	\$ 21,690	\$ 314,088	\$ 340,429	
23-3	Md. 404		Md. 312 to Denton Bypass	3.51	\$ 137,071	\$ 13,707	\$ 147,081	\$ 231,026*	\$ 333,469	
23-4	Md. 401		Md. 313 to Delaware Line	6.31	\$ 288,167	\$ 29,059	\$ 294,141	\$ 590,811	\$ 630,311	
23-5	Md. 313		Goldshoro to Denton			\$ 29,281		\$ 228,579	\$ 228,579	
23-7	Md. 307		Federalburg Bypass E. and W. Md. 307 to Md. 313	0.23	\$ 161,063	\$ 8,514	\$ 22,572	\$ 202,149	\$ 8,928	
			TOTAL	16.11	\$ 1,079,458	\$ 126,196	\$ 79,917	\$ 1,750,871	\$ 1,616,351	

25-1	Md. 318	Secondary Program Projects: Federalshurg to Delaware Line. Preston to Md. 319 Federalshurg to Elwood Md. 313 to Delaware Line. Bridgety to Greensboro Preston to Bureau Templeville to Maryland.	Modify Curves and Resurface. Modify Curves, Widen 24', and Resurface Modify Curves, Widen 24', and Resurface Modify Curves, Widen 24', and Resurface Widen 24' and Resurface. Resurface (2nd Stage) Modify Curves, Widen 22', and Resurface	5.69	\$ 494,777	\$ 31,469	\$ 2,203	\$ 33,672	\$ 19,755			
25-2	Md. 331			9.139	7,657	7,657	661	10,100	10,100	20,912		
25-3	Md. 319			1.80	355,217	29,197	31,427	200,000	31,427	210,378		
25-4	Md. 317			4.56	162,682	9,088	20,082	61,256	474,753*	474,753		
25-5	Md. 480			8.21	221,918	10,608	10,383	14,535	182,157*	182,153		
25-7	Md. 16			2.21	169,396	36,093	16,878	78,958	217,091*	217,091		
25-12	Md. 454			25.47	\$ 1,314,020	\$ 202,464	\$ 105,169	\$ 340,214	\$ 1,961,807	\$ 1,485,366		
TOTAL				11.88	\$ 2,363,478	\$ 328,660	\$ 185,086	\$ 805,514	\$ 3,712,738	\$ 3,101,717		
GRAND TOTAL												
CECIL COUNTY District No. 2												
20-1	C.B. Del. Route	Primary Program Projects: Susquehanna River to Warwick Rising Sun to Pennsylvania Line and Rising Sun By-Pass. U. S. 40 to U. S. 1 U. S. 222 U. S. 213 U. S. 40 New Exp.	One Lane of Ultimate Dual By-Pass 24' Road on New Location, Widen, and Resurface Section of Present Road Modify Curves, Widen 24', Resurface Underpass Pa. R. R., and Interchange U. S. 40 S/P and R/W Acquisition for Interchange at U. S. 40 S/P and R/W Acquisition for 2-12 Additional Lanes. S/P and R/W Acquisition for Dual Highway	3.11	\$ 555,412	\$ 37,205	\$ 26,844	\$ 617,491	\$ 614,411			
20-2	U. S. 1			6.25	681,940	63,632	44,217	151,633	914,452	998,917		
20-3	U. S. 222			1.10	33,600	17,476	5,584	5,000	91,360	41,543		
20-4	U. S. 213					9,958	697	9,000	19,655	15,235		
20-5	U. S. 40					491,221	34,387	13,000	538,608	493,048		
20-6	New Exp.					551,082	38,470	17,000	606,553	554,245		
TOTAL				10.46	\$ 1,208,982	\$ 1,290,275	\$ 150,229	\$ 198,633	\$ 2,818,119	\$ 2,717,429		
31-1	Md. 7			Secondary Program Projects: Delaware Ave. (Elkton) to U. S. 40 U. S. 40 to Pennsylvania Line U. S. 40 to Elk Neck Port Deposit to Rising Sun Elkton to Delaware Line Elkton to Fair Hill U. S. 1 to Delaware Line Bayview to Rising Sun	Resurface Modify Curves, Widen 24', and Resurface Grade Elimination at Northeast and Modify Curves, Widen 24' and Resurface Modify Curves, Widen 24', and Resurface Modify Curves, Widen 24', Resurface, and Bridge Elk Creek Modify Curves, Widen 24', and Resurface Modify Curves, Widen 24', Resurface, and Relocation at Calvert Modify Curves, Widen 24', and Resurface	1.15	\$ 53,030	\$ 1,280	\$ 4,037	\$ 72	\$ 58,419*	\$ 58,419
31-2	Md. 272					7.09	738,829	98,266	56,389	253,284	1,176,768	479,692
31-3	Md. 273					6.19	983,363	84,797	68,535	246,139	1,382,854	1,461,544
31-4	Md. 276					41,682	2,918	1,000	41,600	22,851		
31-5	Md. 279					27,942	1,958	30,900	30,900	28,886		
31-6	Md. 280					516,469	34,317	255,882	861,966	788,312		
31-9	Md. 273					114,039	42,639	12,291	56,470	238,915		
31-10	Md. 271					5,907	393	393	7,500	5,242		
TOTAL			21.78			\$ 2,065,730	\$ 357,511	\$ 180,828	\$ 814,347	\$ 3,818,416	\$ 3,084,164	
GRAND TOTAL			32.24			\$ 3,734,712	\$ 1,557,786	\$ 331,057	\$ 1,012,980	\$ 4,636,565	\$ 5,801,593	

EXHIBIT L, Schedule 1—Continued

GENERAL CONSTRUCTION AND OPERATING FUND
TWELVE-YEAR ROAD CONSTRUCTION PROGRAM FUND—STATEMENT OF AUTHORIZED EXPENDITURES
AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958

PRO- GRAM REFER- ENCE (PAGE- LINE)	ROUTE NUMBER	LOCATION	DESCRIPTION	AUTHORIZED EXPENDITURES							ACTUAL EXPEN- DITURES
				CONSTRUCTION		ENGINEER- ING	ADMINIS- TRATIVE AND GENERAL	RIGHTS-OF- WAY	TOTAL *Final Cost		
				MILES	AMOUNT						
KENT COUNTY (District No. 2)											
Primary Program Projects:											
35-1	C.B. Del. Route	Queen Anne's County Line to Cecil County Line	One Lane of Ultimate Dual	8.79	\$ 1,928,118	\$ 233,411	\$ 125,543	\$ 14,192	\$ 2,301,264	\$ 2,303,831	
35-2	U. S. 213	Goose Hill to Kennedysville	Modify Curves, Widen 24', and Resurface	4.55	717,940	75,006	41,708	42,958	907,792	749,144	
35-3	MD. 313	Galena Md. 290) to Md. 299	Modify Curves, Widen 24', and Resurface	1.46	141,246	10,837	9,485	58,569	229,137	255,133	
		Total		14.80	\$ 2,817,304	\$ 319,344	\$ 176,826	\$ 115,719	\$ 3,429,193	\$ 3,308,108	
Secondary Program Projects:											
37-1	MD. 290	Rocksville to Gratiot	Widen to 22', Resurface, Relocation at Rock Hall	1.50	\$ 70,000	\$ 6,250	\$ 5,191	\$ 5,000	\$ 86,450	\$ 77,200	
37-3	MD. 289	Chestertown to Md. 661	Remove Dips, Widen 22', and Resurface	2.10	75,684	4,423	7,387	19,941	107,435*	107,435	
37-4	MD. 290	Md. 290 to Galena	Widen 24', and Resurface	3.86	275,300	30,227	19,705	77,633	402,865	369,431	
37-5	MD. 298	Lynch to Md. 292	Resurface 20'	1.40	34,102	1,099	2,778		37,979*	37,979	
37-9	MD. 417	Chestertown (U. S. 213) to Morgantown	Modify Curves, Widen 22', and Resurface			1,402	98	1,000	2,500	6,155	
39-26	MD. 566	Stillpond to Harmony Grove	Widen 20' and Resurface	3.82	164,545	3,610	10,921	35,986	215,062*	215,062	
		Total		12.68	\$ 619,631	\$ 47,020	\$ 46,080	\$ 139,560	\$ 852,291	\$ 813,262	
		GRAND TOTAL		27.48	\$ 3,436,935	\$ 366,364	\$ 222,906	\$ 255,279	\$ 4,281,484	\$ 4,121,370	
QUEEN ANNE'S COUNTY (District No. 2)											
Primary Program Projects:											
41-1	C.B. Del. Route	U. S. 213 at Centreville to Kent County Line	Construct One Lane of Ultimate Dual	21.06	\$ 3,840,173	\$ 391,965	\$ 140,339	\$ 127	\$ 4,372,604	\$ 4,566,084	
41-2	U. S. 213	Church Hill to Chestertown	Modify Curves, Widen 24', Resurface, Widen 3' Bridges		22,321	22,871	3,037	8,841	57,073	61,570	
		Total		21.06	\$ 3,862,494	\$ 414,836	\$ 143,376	\$ 8,971	\$ 4,429,677	\$ 4,627,654	
Secondary Program Projects:											
43-2	MD. 19	Church Hill to Md. 313	Resurface	7.44	\$ 152,115	\$ 5,714	\$ 11,839		\$ 169,668*	\$ 169,668	
43-3	MD. 290	Crumpton to Dudley's Corner	Widen 22' and Resurface	4.41	338,262	33,282	23,247	\$ 158,071	\$ 552,892	\$ 492,563	

Project No.	Project Description	U. S. 213 to Md. 290	U. S. 50 to Dominion	Md. 313 to Westernly	Centreville to Ruthsburg	U. S. 50 to Romancoke	TOTAL	GRAND TOTAL
43-4	Md. 544	2.13	118,000	34,983	10,212	10,212	168,207	37,432
43-5	Md. 552	0.77	14,998	972	450	450	16,498	186,041
43-6	Md. 514	5.71	433,910	42,898	38,814	38,814	516,336	202,722
43-12	Md. 304	20.49	\$ 1,057,315	\$ 128,511	\$ 86,194	\$ 86,194	\$ 1,358,214	\$ 1,499,255
43-16	Md. 33	42.15	\$ 4,919,809	\$ 543,347	\$ 229,570	\$ 229,570	\$ 5,922,296	\$ 6,126,909
TALBOT COUNTY (District No. 2)								
45-1	U. S. 50							
45-2	Md. 404							
Primary Program Projects:								
Trapline to Choptank River								
U. S. 50 to Hillsboro Relocation								
TOTAL								
47-1	Md. 33	13.45	\$ 898,036	\$ 67,472	\$ 63,134	\$ 63,134	\$ 1,028,776	\$ 1,171,154
47-2	Md. 33	1.22	48,016	2,007	3,233	3,233	53,256	51,117
47-3	Md. 309	1.05	14,964	1,780	610	610	17,354	14,618
47-4	Md. 332	2.34	183,872	14,310	2,826	2,826	201,004	47,068
47-5A	Md. 333	3.83	438,769	35,101	30,714	30,714	504,584	222,376
47-10	Md. 451	22.39	\$ 1,610,657	\$ 136,026	\$ 114,548	\$ 114,548	\$ 1,861,731	\$ 1,873,727
TOTAL								
GRAND TOTAL								
49-1	U. S. 240	4.71	\$ 2,007,572	\$ 158,199	\$ 138,422	\$ 138,422	\$ 2,344,515	\$ 2,216,121
49-2	Circular- central Hg.							
49-3	Md. 97							
49-4	Md. 97							
49-5	Old U.S. 29							
49-6	Old U.S. 29							
49-7	Md. 320	0.22	105,458	131,105	15,969	15,969	257,531	661,414
49-8	Md. 193	0.53	722,632	76,569	5,360	5,360	804,561	108,258
49-9	Md. 193	2.41	1,163,950	92,876	51,757	51,757	1,308,583	953,633
49-10	W/N Pike	4.15	1,587,169	171,105	87,201	87,201	1,851,575	1,621,525
49-11	W/N Pike	11.08	6,612,291	99,005	113,538	113,538	6,825,834	1,805,838
49-12	Rock Creek Parkway Connection							
49-13	Rock Creek Parkway Connection							
MONTGOMERY COUNTY (District No. 3)								
Dual Highway with Median Divider S. P.								
TOTAL								
GRAND TOTAL								
49-1	U. S. 240	4.71	\$ 2,007,572	\$ 158,199	\$ 138,422	\$ 138,422	\$ 2,344,515	\$ 2,216,121
49-2	Circular- central Hg.							
49-3	Md. 97							
49-4	Md. 97							
49-5	Old U.S. 29							
49-6	Old U.S. 29							
49-7	Md. 320	0.22	105,458	131,105	15,969	15,969	257,531	661,414
49-8	Md. 193	0.53	722,632	76,569	5,360	5,360	804,561	108,258
49-9	Md. 193	2.41	1,163,950	92,876	51,757	51,757	1,308,583	953,633
49-10	W/N Pike	4.15	1,587,169	171,105	87,201	87,201	1,851,575	1,621,525
49-11	W/N Pike	11.08	6,612,291	99,005	113,538	113,538	6,825,834	1,805,838
49-12	Rock Creek Parkway Connection							
49-13	Rock Creek Parkway Connection							

(Continued next page)

GENERAL CONSTRUCTION AND OPERATING FUND
 TWELVE-YEAR ROAD CONSTRUCTION PROGRAM FUND STATEMENT OF AUTHORIZED EXPENDITURES
 AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958

PRO- GRAM REFER- ENCE (PAGE- LINE)	ROUTE NUMBER	LOCATION	DESCRIPTION	AUTHORIZED EXPENDITURES							ACTUAL EXPEN- DITURES
				CONSTRUCTION		ENGINEER- ING	ADMINIS- TRATIVE AND GENERAL	RIGHTS-OF- WAY	TOTAL (\$Paid Cost)		
				MILES	AMOUNT						
			MONTGOMERY COUNTY District No. 3 Continued								
49-15	Wisconsin Avenue	Rock Creek Parkway to Cedar Lane	Widened to 40' and Resurfaced	1.25	\$82,061	74,796	61,723	15,791	1,031,371	318,025	
49-17	Md. 28	Rockville to Northco	S/P and R/W for Widening and Resurfacing			6,149	191	130,000	576,000	133,475	
49-18	Md. 27	Wash. Nat. Pike toward Damascus	Modify Curves, Widen 24', and Resurface	1.72	102,111	59,373	37,313	17,389	658,308*	668,506	
49-19	U. S. 210	Cedar Lane to Jones Bridge Road	Resurface and add 6' Median	0.83	318,841	27,907	21,119	19,991	121,611	317,436	
49-20	U. S. 210	Md. 110 to Bradley Lane	Resurface	0.51	39,336	1,206	2,813		13,355*	33,322	
49-21	U. S. 210	Bradley Lane to D. C. Lane	Storage Lane		1,550	77			1,627	1,627	
49-23	New U. S. 29	Burtonsville to White Oak	1 - 24' Lane of Ultimate Dual	1.77	2,362,390	197,935	161,295	643,858	3,358,176	3,351,087	
49-26	Circumfer- ential Hgwy.	Prince George's County Lane toward G. W. Memorial Parkway	Dual Highway (1st Section)	0.05	513,500	41,087	35,852		500,629	49,180	
51-32	W/X Pike	Seven Locks Road to River Road	Dual Highway	1.70	1,131,063	60,169	77,886		1,272,109	1,080,809	
51-37	Circumfer- ential Hgwy.	5.75 Mile W. of Prince George's County Lane to G. W. Memorial Parkway	Dual Highway (2nd Section)	1.09	1,292,187	112,630	91,100		1,495,917	227,395	
Unallo- cated	U. S. 210	D. C. Lane to Frederick	Dual Highway			517,655	36,235		553,890	511,912	
		TOTAL		13.10	\$23,191,281	\$ 3,613,924	\$ 1,777,111	\$ 7,156,180	\$36,338,190	\$28,602,959	
53-1	16th Street	Secondary Program Projects:	Construct 2 - 31' Lanes, 12' Median, Bridge B. & O.			\$ 79,311	\$ 5,553	\$ 325,000	\$ 109,867	\$ 119,483	
53-2	Md. 187	Georgia Ave. to East West Highway	Construct 2 - 31' Lanes, 14' Median on 100' R/W			21,386	1,714	7,509	33,750	32,701	
53-3	Md. 586	Beane to U. S. 210	Widen 18' and Resurface	5.55	\$ 2,251,727	283,987	171,386	225,252	3,132,389	3,357,374	
53-4	Md. 191	Md. 97 to Rockville	Resurface 24'	0.89	15,386	1,139	923		17,718*	17,718	
53-5	Md. 390	Md. 192 to Md. 320	Widen 41' and Resurface			19,206	1,314		20,550	8,611	
53-6	Bradley Lane	Leland Street to Proposed Circumferential Highway	S/P and R/W Acquisition for Dual, Construct 1 - 31' Lane, 1 Lane Bridge over B. & O.			3,271	229	1,000	1,500	39,684	
53-7	Md. 28	Through Rockville	Resurface	1.00	21,707	804	1,337		23,848*	23,848	
53-8	Md. 515	Silver Spring to N. Woodside	Grade Shoulders Only	1.12	7,663	17	357		8,288*	8,288	
53-9	Md. 186	D. C. Lane to Woodline Street	Modify Curves, Widen 24', and Resurface			7,579	530		8,109	1,533	
53-10	Md. 669	Md. 193 to B. & O. R.	Widen 24' and Resurface		1,865		357		5,222*	3,222	
53-13	Md. 168	Burtonsville to Prince George's County Lane	Modify Curves, Widen 24', and Resurface			20,229	1,185	19,451	41,226	39,185	
53-14	Md. 28	Frederick County Lane to Damascus	Resurface and Widen Spoca Creek Bridge			15,423	20,214	1,799	358,618*	358,618	
53-25	Md. 116	Ashton to Brighton	Modify Curves, Widen 24', and Resurface	13.01	321,212			500			
53-25	Md. 116	Washington Grove to Damascus	Widen 24', Resurface, Relocation at Laytonsville			1,121	79		1,200	842	
55-28		TOTAL		21.57	\$ 3,122,599	\$ 156,927	\$ 205,730	\$ 580,532	\$ 4,365,779	\$ 4,318,786	
		GRAND TOTAL		64.97	\$36,613,874	\$ 1,070,818	\$ 1,982,841	\$ 8,039,712	\$10,704,275	\$32,921,715	

PRINCE GEORGE'S COUNTY (District No. 3)								
59-1	Circumfer- ential Hg., Md. 500	Indian Head Road to Montgomery County Line, Md. 410 to U. S. 1	S/P and R/W Acquisition for Dual Highway Construct Dual Highway	\$ 2,677,098 38,750	\$ 1,352,140 10,000	\$ 86,079 1,871	\$ 2,238,279 26,879	\$ 4,204,857 23,247
59-2	W/A Ex- pressway U. S. 301	U. S. 301 to D. C. Line	Construct Dual Highway	765,173	6,461,008	225,512	6,461,008	8,958,960
59-3	U. S. 301	Anne Arundel County Line to A/W Expressway	Construct Dual—Utilize Present Road	59,708	713,413	2,43	59,708	8,411,442
59-4	U. S. 301	A/W Expressway to Marlboro By-Pass	Construct Dual—Utilize Present Road	149,924	2,086,983	7.33	149,924	9,920,806
59-5	U. S. 301	Marlboro By-Pass	S/P and R/W Acquisition for Control and Add 2nd Lane	66,545	20,181	6.029	66,545	55,172
59-6	U. S. 301	Marlboro By-Pass to T. B.	Construct Dual—Utilize Present Road	106,323	1,157,208	6.23	106,323	90,901
59-7	U. S. 301	D. C. Line to U. S. 301	S/P and R/W Acquisition and Construction Dual Highway 6.0 Miles	269,893	18,896	18,896	269,893	368,636
59-8	U. S. 301	U. S. 301 to Hills Bridge	By-Pass Marlboro Rehabilitate Existing Road and 2 1/2 Lanes, 1/2 Cost Patuxent River Bridge, and U. S. 1 Interchange	93,297	691,674	4.77	93,297	1,633,929
59-9	Md. 5	Clinton to T. B.	Construct 1 Lane of Ultimate Dual	89,798		56,659	89,798	1,833,433
59-10	New Hamp- shire Ave. Md. 650	D. C. Line to Montgomery County Line	Construct Dual—Utilize Present Road	112,826	2,134,409	3.19	112,826	2,793,827
59-11	Md. 193	Montgomery County Line to Colesville Road	Construct Dual—Utilize Present Road	83,020	1,036,951	1.53	83,020	1,361,051
59-12	U. S. 1	Bridge over Patuxent River	1/2 Cost of Bridge (New)	1,569	106	106	1,569	975,660
59-13	U. S. 50	At Peace Cross	Flow Control on Bridge Approaches and Bridge	73,941	144,272	1.01	73,941	1,179
59-14	U. S. 301	D. C. Line to Howard County Line	Resurface	17,828	369,321	6.61	17,828	1,886,697
61-24	Circumfer- ential Hg. U. S. 50	2nd Section	Dual Highway	7,983	266,545	9.346	7,983	418,576
61-28	U. S. 50	Anacostia River to Priest's Bridge	Resurface (Present Road)	654	10,000	10,000	654	242,313
TOTAL				\$ 3,395,191	\$ 16,418,417	42.06	\$ 3,395,191	\$ 24,563,600
Secondary Program Projects:								
63-1	Gorman Ave. Md. 198	U. S. 1 (Laurel) to Md. 198 (Montgomery Street)	Construct 2 1/2 Pavement with 2—10' Shoulders	2,374	141,749	17,363	2,374	212,323
63-2	Md. 200	W. End of Laurel to Montgomery County Line	Modify Curves, Widen 2 1/2', and Resurface	31,370	10,715	9,375	31,370	34,900
63-3	Md. 201	Md. 214 to Md. 4	Resurface	1,660	17,753	1,660	1,660	43,596
63-4	Md. 205	U. S. 50 to D. C. Line	Dual Highway	382,470	3,862,850	10,000	382,470	20,479
63-5	Md. 206	Alternate U. S. 1 to Rhode-Island Avenue	Dual Highway	326,043	1,965,011	18,970	326,043	5,483,535
63-6	Md. 208	Md. 410 to Rhode-Island Avenue	Construct 2—12' Pavement, 2—5' Parking 40', and Bridge B. & O.	17,363	141,749	17,363	17,363	3,412,731
63-7	Md. 211	At U. S. 301	Widen to 36' and Resurface	14,428	134,692	10,715	14,428	212,323
63-8	Md. 214	U. S. 301 to Md. 202	Construct 2—24' Lanes and 1 1/2' Median	18,956	236,950	16,587	18,956	165,192
63-9	Md. 214	U. S. 301 to Md. 202	Construct 2—24' Lanes, 1 1/2' Median, S/P, R/W, and Construct Lane of Ultimate Dual	44,392	281,746	21,411	44,392	272,493
63-10	Md. 214	Md. 202 to D. C. Line	Resurface	3,108	8,877	3,108	3,108	350,515
63-11	Md. 203	U. S. 1 to Md. 205	Resurface	830	17,162	533	830	322,500
63-12	Md. 412	U. S. 1 to Md. 205	Resurface	1,695	17,162	1,695	1,695	10,240
63-13	Md. 430	Md. 4 to Silver Hill	Widen 26' to 36' and Resurface all 30'	319	3,988	279	319	19,797*
63-14	Md. 458	Md. 4 to Silver Hill	Widen to 36' and Resurface	8,878	622	622	8,878	14,965
63-15	Md. 501	Md. 212 to Md. 500	Modify Curves, Widen 2 1/2', Resurface, Widen 1 Bridge	21,120	11,000	11,000	21,120	19,500
63-16	Md. 502	U. S. 50 to Md. 159 (Cheverly)	Widen to 2—2 1/2' and 6' Median	1,688	1,000	1,688	1,688	13,575
63-17	Md. 410	Riggs Road to Colesville Road	Construction of Bridge over Northwest Branch and Resur- facing of Relocation Section	18,692	662,860	35,672	18,692	26,808
63-17A	Md. 223	Pisestaway Creek Bridge and Approaches	R/W and Preliminary Engineering	125	5,000	125	125	137,000
63-17B	Md. 223	D. C. Line to Piscabag Road	Dual Highway	3,828	51,693	3,828	3,828	963,133
63-18	Md. 207	Old Landover Road to Md. 214	Modify Curves, Widen 2 1/2', Resurface, and Widen 2 Bridges	2,924	5,000	2,924	2,924	13,226
63-19	Md. 207	Md. 206 to Banker Hill Road	Widen 2 1/2' and Resurface	192	2,756	192	192	49,700
63-22	Md. 207	Md. 212 to D. C. Line	Modify Curves, Widen 2 1/2', and Resurface	995	15,540	995	995	28,015
63-23	Md. 211			14,213		14,213	14,213	5,617
				(Continued next page)				

EXHIBIT L, Schedule 1 Continued

GENERAL CONSTRUCTION AND OPERATING FUND

TWELVE-YEAR ROAD CONSTRUCTION PROGRAM FUND STATEMENT OF AUTHORIZED EXPENDITURES AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958

PROGRAM REFERENCE (PAGE-LINE)	ROUTE NUMBER	LOCATION	DESCRIPTION	CONSTRUCTION			AUTHORIZED EXPENDITURES			ACTUAL EXPENDITURES	
				MILES		AMOUNT	ENGINEERING	ADMINISTRATIVE AND GENERAL	RIGHT-OF-WAY		TOTAL (Fund Cost)
Secondary Program Projects: (Continued)											
77-7	Md. 117	Baltimore County Line toward U. S. 1	HARFORD COUNTY District No. 41 Continued Modify Curves, Widen 21', Resurface and Bridge at Little Campwood				291			5,246	
77-9	Md. 165	Md. 24 to Pennsylvania Line	Widen 2 Bridges	1.53	35,072	18,131	1,206		1,500	19,000	
77-10	Md. 21	U. S. 40 to Edgewood	Resurface 32'	2.11	51,800	2,271		1,299		40,111*	
77-11	Md. 152	U. S. 10 to Magnolia	Resurface 24'			3,519		2,801		10,111	
77-11A	Md. 7	Bridge over Pa. R. R.	Bridge and Road Approach			3,271		1,375		62,724*	
77-12	Md. 116	Baltimore County Line to Md. 23.	Modify Curves, Widen 21', Resurface, and Bridge at Little Campwood			1,473		229		3,500	
77-14	Md. 136	Dublin to Pennsylvania Line	Modify Curves, Widen 24', Resurface, and Bridge at Little Campwood			11,206		994	11,000	5,000	
77-19	Md. 161	U. S. 1 to Md. 155	Modify Curves, Widen 21', Resurface, and Widen Bridge at Deer Creek			1,131		79		1,210	
77-20	Md. 165	Md. 23 to Md. 24	Modify Curves, Widen 21', Resurface, and Widen Bridge at Deer Creek			6,975		125	15,000	21,500	
77-21	Md. 165	Baltimore County Line to Md. 23	Modify Curves, Widen 22', Resurface, and Widen Bridge at Little Campwood			7,009		191		7,500	
79-28	Md. 152	U. S. 40 to Md. 146	Modify Curves, Widen 22' and Resurface, and Bridges B. & O. and Pa. R. R.	5.84	993,153	107,611		70,347	808,065	1,979,236	
		TOTAL		18.62	\$ 2,129,953	\$ 424,950	\$ 178,582	\$ 1,140,819	\$ 3,874,304	\$ 3,351,178	
		GRAND TOTAL		27.31	\$ 3,151,998	\$ 1,570,335	\$ 343,747	\$ 1,651,650	\$ 7,020,130	\$ 6,134,022	
Primary Program Projects:											
81-1	Balto.	Nursery Road to Patapsco River	ANNE ARUNDEL COUNTY (District No. 5)								
81-2	Balto.	U. S. 301 to Md. 2	Dual Highway and $\frac{1}{2}$ Cost of Patapsco River Bridge	0.61	\$ 1,621,123	\$ 73,417	\$ 90,454	\$ 200,000	\$ 1,985,294	\$ 1,209,136	
81-3	Reloc.	U. S. 301 to Md. 2	Dual Highway and Interchange at U. S. 301 and Md. 2	1.28	1,043,125	17,832	63,895	380,000	1,504,852	1,558,975	
81-4	U. S. 301	Belway to 1 Mile S. of Glen Burnie (Md. 618)	Construct Dual Highway—Utilize Present Road	8.02	3,871,904	379,099	190,420	921,362	5,362,485	5,493,522	
81-5	Md. 4	Hills Bridge to Wayson's Corner	Rehabilitate Existing Road, Add 1—24' Lane and $\frac{1}{2}$ Cost of Patuxent River Bridge	11.91	2,390,336	259,222	169,173	1,124,500	3,852,231	2,772,801	
81-6	Md. 2	Baltimore City Line to Md. 171	Resurface Only	4.38	407,420	22,176	1,573	9,300	23,229	33,613	
81-7	Md. 2	Md. 171 to Mountain Road	Widen Both Lanes to 24' and Resurface			3,763		263		13,114	
81-8	Md. 2	Mountain Road to Revell Highway	Widen Both Lanes to 24' and Resurface	9.68	710,920	39,888	29,269	20,700	197,257	477,256	
		TOTAL				20,887	49,940	781,747*		781,747	

81-9	A.W. Expressway	Severn River Bridge	Painting, Lighting, etc.	\$5,563	\$769	6,695	104,327*	101,327
81-10	Mid. 2	Parole to South River	S, P and R, W for 1/2 Lane of Ultimate Dual	14,619	1,026	1,609	15,652	15,551
81-11	Mid. 2	South River to Sharp Corner	S, P and R, W for 1/2 Lane of Ultimate Dual	6,639	186	1,500	29,023	12,831
81-12B	U. S. 50	At Maryland P-21 (Full Interchange)	Preliminary Engineering	2,323	177	2,700	7,700	7,700
81-13	Mid. 2	Mt. Zion to Calvert County Line at Oranges Station	S, P and R, W for Widening 2 1/2' and Resurface	29,159	2,041	125,000	159,200	181,639
81-14	Mid. 416	Wayson's Corner to Calvert County Line (Lyons Creek)	S, P and R, W Acquisition for Rehabilitation of Existing Road and for Additional Lane	37,742	2,643	15,000	55,385	56,603
81-15	Baths	Marchand 2 to Pomington Avenue	S, P and R, W Acquisition for Dual Highway	2,804	196	10,000	13,000	18,615
81-19	Beltway	Mt. Zion to Calvert County Line	Modify Curves, Widen 2 1/2', and Resurface	352,003	24,403	380,841	227,536	227,536
TOTAL								
Secondary Program Projects:								
82-1	C.B. R.R.	Calvert County Line to Calvert County Line	Second Stage—Resurface	31,205	2,508	3,361	37,224*	37,224
82-2	Mid. 167	Patuxent River to Md. 170	Resurface 2 1/2'	6,173	6,173	2,890	48,872	48,872
82-3	Mid. 171	Odyssey Mills to Md. 2	Resurface	69,435	3,985	79,678*	79,678*	79,678*
82-4	Mid. 175	Odyssey Mills to Md. 55	Resurface 2 1/2'	44,777	1,226	4,451	49,454	49,454
82-5	Mid. 176	Md. 551 to B.W. Expressway	Widen 2 1/2' and Resurface	37,600	1,030	2,898	11,533*	11,533*
82-6	Mid. 270	Md. 2 to Md. 181	Modify Curves, Widen 2 1/2' and Resurface	8,508	879	9,000	7,412	7,412
82-10	Mid. 655	Patuxent River to Davidsonville	Modify Curves, Widen 2 1/2' and Resurface	17,321	12,563	2,716	12,412	22,575
82-11	Mid. 914	Md. 2 to U. S. 301	Modify Curves, Widen 2 1/2' and Resurface	4,260	6,511	5,697	14,032	14,211
82-12	Mid. 648	Md. 2 to U. S. 301	Resurface 2 1/2'	84,872	12,079	3,778	114,112	142,111
82-13	Mid. 170	U. S. 301 to Md. 175	Resurface 2 1/2' and Drainage	47,446	2,45	2,45	2,45	63,518
82-14	Mid. 170	U. S. 301 to Md. 175	Resurface 2 1/2'	110,777	9,908	8,830	145,582*	145,582
82-16	Mid. 170	B.W. Expressway to Laurel Race Track	Resurface 2 1/2' Lanes with Narrow Median	32,421	1,000	10,000	20,002	30,830
82-18	Mid. 172	Jacobsville (Gibson Island)	Construct 2 - 2 1/2' Lanes with Narrow Median	2,269	15,000	49,600	40,226	40,226
82-22	Mid. 172	Doer's Corner to U. S. 50	Resurface 2 1/2'	358	25	1,000	1,250	1,250
82-23	Mid. 178	Doer's Corner to U. S. 50	Modify Curves, Widen 2 1/2' and Resurface	187	13	13	10,000	6,152
82-24	Mid. 468	Md. 253 to Shobside	Modify Curves, Widen 2 1/2' and Resurface	50,811	3,550	54,400	41,897	41,897
82-25	Mid. 551	Md. 170 to Md. 175	Increase Vertical Clearance to 14'	199,025	38,900	22,547	101,967	362,439
82-29	Mid. 476	W. B. & A. Railroad Crossing at U. S. 301	Modify Curves, Widen 2 1/2' and Resurface	2,43	822	58	880	3,890
82-30	Mid. 214	Md. 468 to Beverly Beach	Modify Curves, Widen 2 1/2' and Resurface	1,860	131	2,000	2,000	2,551
82-31								
TOTAL								
GRAND TOTAL								
29.47	\$	719,287	\$	213,539	\$	68,392	\$	152,244
68.67	\$	11,210,981	\$	1,145,826	\$	701,026	\$	2,973,106
								\$16,039,939
								\$14,137,182

CALVERT COUNTY District No. 5								
87-1	Mid. 2	Md. 416, Sunderland to 1.2 Mile S. of Huntingtown	Obtain S/P R/W, Widen Shoulders, Extend Culverts, and Resurface 2 1/2' (2nd Stage)	175,389	18,029	12,839	214,261	196,765
87-2	Mid. 2	Prince Frederick Bx-Pass	S/P R/W, and 1 Mile Widen 2 1/2', Modify Curves, and Resurface	57,028	7,037	3,163	67,228*	67,228
87-3	Mid. 2	Prince Frederick Bx-Pass to 1 Mile S. of Lashy	S/P R/W, and 1 Mile Widen 2 1/2', Modify Curves, and Resurface	142,725	29,119	9,686	227,956	472,895
87-5	Mid. 416	Anne Arundel County Line, Lyons to Md. 2, Sunderland	S/P R/W Acquisition for Widening and Resurfacing	39,264	1,636	23,338	130,681	20,631
87-6	Mid. 231	Prince Frederick to Patuxent River	Modify Curves, Widen 2 1/2' and Resurface	218,932	29,668	18,984	412,517*	412,517
87-6A	Mid. 2	At Solomon's Island	Resurface, Bridge Widened, etc.	258,346	9,322	3,329	300,427	293,177
TOTAL								
14.91	\$	852,420	\$	138,383	\$	68,746	\$	1,428,919
								\$ 1,293,511

(Continued on next page)

EXHIBIT L, Schedule 1—Continued

GENERAL CONSTRUCTION AND OPERATING FUND
 TWELVE-YEAR ROAD CONSTRUCTION PROGRAM FUND—STATEMENT OF AUTHORIZED EXPENDITURES
 AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958

Pro- gram Refer- ence (Page- Line)	Route Number	Location	Description	AUTHORIZED EXPENDITURES					ACTUAL EXPEN- DITURES	
				CONSTRUCTION		ENGINEER- ING	ADMINIS- TRATIVE (GENERAL)	RIGHTS-OF- WAY		TOTAL (*Final Cost)
				MILES	AMOUNT					
Secondary Program Projects:										
89-1	Md. 260	Paris P. O. to Chesapeake Beach	Widen 24' and Resurface	1.25	\$ 40,489	\$ 8,851	\$ 619	\$ 80	\$ 9,470	\$ 26,353
89-2	Md. 261	North Beach (Bay Avenue) to South Beach	Modify Curves, Widen 24', and Resurface			2,530	2,607		45,706*	45,706
89-3	Md. 263	Md. 2 to Plum Point	Modify Curves, Widen 20', and Resurface	6.78	208,155	28,309	1,991		30,300	5,680
89-4	Md. 264	Md. 2 to Broopole Island	Modify Curves, Widen 20', and Resurface	3.40	58,208	12,626	16,250	62,106	300,197*	300,197
89-5	CBR R/W	Anne Arundel County Line to Paris P. O.	Resurface (2nd Stage)	2.13	201,697	4,777	6,252		69,237*	69,237
89-7	Md. 402	Md. 2 to Dare's Beach	Modify Curves, Widen 20', and Resurface			15,329	14,120	157,000	388,146	298,556
		Total		13.56	\$ 509,549	\$ 72,422	\$ 41,839	\$ 219,246	\$ 843,050	\$ 745,729
		GRAND TOTAL		28.47	\$ 1,361,969	\$ 210,805	\$ 110,585	\$ 588,616	\$ 2,271,975	\$ 2,139,243
CHARLES COUNTY (District No. 5)										
Primary Program Projects:										
93-2	U. S. 301	Waldorf to White Plains	Dual Highway	2.72	\$ 810,548	\$ 53,716	\$ 56,281	\$ 44,902	\$ 965,427*	\$ 965,427
93-3	U. S. 301	White Plains to Lyons Corner (Md. 327)	Dual Highway	2.53	418,683	53,942	41,943	161,000	675,568*	675,568
93-4	U. S. 301	Lyons Corner (Md. 327) to Potomac River Bridge	Add 1—24' Lane	5.00	698,592	104,889	50,400	41,000	864,881	323,032
93-5	Md. 5	Waldorf to 1 Mile N. of Md. 488	S. P. and R/W for Widening and Resurfacing			15,017	1,052		16,069	7,008
93-6	Md. 5	1 Mile N. of Md. 488 to St. Mary's County Line	S. P. and R/W for Widening and Resurfacing			25,637	1,794		27,431	11,963
93-7	Md. 6	La Plata to Md. 5	Resurfacing 22'	12.47	181,683	35,608	2,492	5,000	43,100	38,022
93-8	Md. 225	La Plata to Indian Head	Widen 24' and Resurface	0.28	12,277	9,236	11,437		202,356*	202,356
93-9	Md. 225	Naval Proving Ground to Md. 210	Resurface	7.22	76,505	489	811		13,577*	13,577
93-9A	Md. 231	Hughesville to Patuxent River	Resurface			2,894	6,291		85,000*	85,000
		Total		30.22	\$ 2,168,288	\$ 301,428	\$ 172,391	\$ 251,902	\$ 2,894,009	\$ 2,323,453
Secondary Program Projects:										
95-1	Md. 210	Prince George's County to Indian Head	Resurfacing 24'	6.00	\$ 68,614	\$ 4,893	\$ 5,222	\$ 78,729*	\$ 78,729	
95-2	Md. 3	Newberg to Tompkinsville	Resurfacing 2nd Stage	6.01	122,578	4,319	8,993		135,890*	135,890
95-3	Md. 6	Hilltop to La Plata	Modify Curves, Widen 24', and Resurface	4.57	331,314	19,432	22,495	\$ 220,052	\$ 659,293	\$ 659,293
95-4	Md. 224	Md. 210 to Doncaster	Modify Curves, Widen 24', and Resurface, etc.	5.62	541,069	78,573	40,346		819,863	819,863
95-5	Md. 228	Waldorf at U. S. 301 to Md. 227	Modify Curves, Widen 24', and Resurface	5.16	769,592	110,695	56,413	235,399	1,172,099	949,700
95-6	Md. 228	Waldorf at U. S. 301 to Md. 227	Modify Curves, Widen 24', and Resurface, and Widen 2 Bridges	1.30	74,049	36,449	2,551	30,000	369,000	188,430
95-7	Md. 234	Prince George's County Line to Patuxent	Modify Curves, Widen 24', and Resurface			14,456	6,778	230,634	115,917*	115,917
95-8	Md. 234	U. S. 301 to St. Mary's County Line	Modify Curves, Widen 24', and Resurface			8,318	582		8,900	34,117
95-8A	Md. 226	Bryans Road to Marshall Hall	Modify Curves, Widen 20', and Resurface	4.45	187,408	20,523	14,047	124,094	346,372	364,784
95-18A		Cobb Island Bridge and Approaches	Preliminary Engineering			3,925	275		4,200	1,610
		Total		33.11	\$ 2,094,624	\$ 301,883	\$ 157,702	\$ 930,179	\$ 3,484,388	\$ 2,689,044
		GRAND TOTAL		63.33	\$ 4,262,912	\$ 603,311	\$ 330,093	\$ 1,182,081	\$ 6,378,397	\$ 5,012,497

Item No.	Location	Primary Program Projects:	ST. MARY'S COUNTY (District No. 5)	99-1	99-2	99-3	99-4	Total	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
99-1	Md. 5	Loveville to Leonardtown	S/P and R/W Acquisition for Widening and Resurfacing	9.36	\$ 916,385	\$ 17,056	\$ 1,194	\$ 5,000	\$ 23,250	\$ 13,437									
99-2	Md. 5	Leesville to Leonardtown	Modify Curves, Widens 24', and Resurface	3.47	260,114	81,302	47,563	470,809	1,519,669	1,576,574									
99-3	Md. 246	Md. 5 (1.67 Mile) to Md. 235 (Lexington Park)	Rehabilitate Widens 24' and Resurface						493,691	148,071									
99-4	Md. 5	St. Mary's City to Ridge	S/P and R/W for Widening and Resurfacing			21,361	1,509		23,070	1,380									
		TOTAL.....		12.43	\$ 1,176,809	\$ 183,210	\$ 78,340	\$ 620,880	\$ 2,059,239	\$ 2,085,091									
101-1	Md. 235	Secondary Program Projects:	Modify Curves, Widens 24', and Resurface	8.48	\$ 777,500	\$ 87,297	\$ 56,277	\$ 272,500	\$ 1,193,631	\$ 711,311									
101-2	Md. 237	Lexington Park to Ridge	Resurface 22'	3.43	58,928	2,972	3,120	64,620*	14,000	20,386									
101-3	Md. 212	Clements (Md. 237) to Milestown (Md. 238)	Modify Curves, Widens 24', Resurface, Widens 2 Bridges			8,972	628	5,000	2,200	4									
101-4	Md. 214	Md. 5 to Valley Lee	2nd Stages, Resurface 24', and Resurface	3.59	61,033	2,495	131		66,541*	66,841									
101-5	Md. 219	Md. 5 to Valley Lee	Modify Curves, Widens 24', Resurface, and New Bridge at Valley Lee to Fincy Point	4.67	776,400	66,876	54,907	152,000	1,049,482	600,091									
101-6	Md. 219	Valley Lee to Fincy Point	Resurfacing	0.26	77,314	247	354		6,918*	6,918									
101-8	Md. 376	Washington Street in Leonardtown	Widens 30' and Resurface	0.60	10,523	3,085	266		11,324*	11,324									
101-9	Md. 379	Lawrence, Spaulding Sts. in Leonardtown	Widens 30' and Resurface			3,845	306		4,151*	4,151									
101-10	Md. 235	Md. 235 toward Leesville in Md. 5	2nd Stages, Resurface 22', and Resurface	4.24	73,661	3,014	3,894		80,572*	80,572									
101-12	Md. 242	Morazza (Md. 5) to Clements (Md. 237)	Modify Curves, Widens 24', and Resurface			18,752	1,513		20,265	16,018									
101-13	Md. 237	Charles County Line to Md. 5 (Helen)	Modify Curves, Widens 22', and Resurface			24,706	1,734		26,440	22,696									
101-15	Md. 234	Charles County Line to Md. 5 (Helen)	Modify Curves, Widens 24', and Resurface			7,196	504		7,700	3,360									
101-18	Md. 242	Milestown (Md. 238) to Colton Point	Modify Curves, Widens 24', and Resurface	25.37	\$ 1,764,440	\$ 227,962	\$ 126,153	\$ 429,500	\$ 2,548,064	\$ 1,606,438									
		TOTAL.....		37.80	\$ 2,911,258	\$ 411,172	\$ 204,493	\$ 1,050,380	\$ 4,607,303	\$ 3,691,359									
		GRAND TOTAL																	
105-1	U. S. 40	Primary Program Projects:	Resurface 24', and Bank Curves	1.58	\$ 115,018	\$ 9,322	\$ 7,491	\$ 1,086	\$ 133,357	\$ 135,449									
105-2	New Location	Garrett County Line to Frostburg	S/P and R/W Acquisition for Dual			217,711	15,239	300,000	532,950	451,877									
105-3	U. S. 40	Through Cumberland (Line "A" and "B")	S/P and R/W Acquisition, Establish C/L Allway, Improve W. Slope, Polish Mountain, E. Slope, Martin Mountain, and 3rd Lanes	4.58	3,061,949	379,710	248,696	378,000	4,038,955	3,564,453									
105-4	U. S. 220	1 Mile S. of Rawlins to 1.415 Mile N. of McCool	Modify Curves and Resurface	5.72	1,196,109	91,291	79,882	250,367	1,617,649	1,579,830									
105-5	New Location	Celanese Plant to Cumberland	Add 4th Lane Where Possible and Resurface			26,355	1,845	300,000	328,200	342,392									
105-6	U. S. 220	Md. 53 to N. Limits of Cumberland	S/P and R/W Acquisition for Dual Control			157,979	11,058		169,037	92,886									
105-7	U. S. 40	W. Limits of Cumberland to Md. 53	W. Limits Cumberland to Md. 36, Resurface from Md. 36			10,514	736	75,000	90,947	78,167									
105-8	Md. 51	Route "A" and "B" to N. Limits of Cumberland	S/P and R/W for 1.20 Miles Dual and 1.35 Miles, 1-24'			4,697													
105-9	Md. 51	North Branch toward Paw Paw	Modify Curves, Widens 22', and Resurface			182,433	12,771	522,419	717,623	389,198									
105-11	U. S. 40	Cumberland toward Sideling Hill	Reconstruction	2.35	1,071,828	36,916	1,884	5,000	1,114,728	52,283									
105-13	Md. 51	Route "A" and "B" to E. Limits of Cumberland	Dual Highway (Line "C")	1.92	519,227	17,261	34,666	20,000	1,199,349	57,360									
105-14	U. S. 220	Cumberland to Pennsylvania Line	S/P and R/W Acquisition and Widens 24'			2,150	150		2,300	94,344									
105-20	Md. 51	Route "A" and "B" to E. Limits of Cumberland	Construct 1-24' Lane (Line "C")	1.09	699,869	32,194	42,842	56	774,961	464,261									
		TOTAL.....		16.94	\$ 6,668,697	\$ 1,189,813	\$ 499,244	\$ 1,851,928	\$ 10,200,682	\$ 7,302,480									

(Continued next page)

111-9	111-9	Potomac River at Kitzmiller	Construct Bridge.	0.47	326,917	28,791	25,655	47,527	428,800
111-9A	County Rd.	Md. 38 to Md. 135	Engineering	2.56	610,809	48,865	42,755	2,000	704,430
111-10	Md. 42	Friendsville to Penna. Line	Modify Curves, Widen 24', and Resurface.	0.18	14,558	2,013	997	11,420	17,558*
111-11	Md. 135A	Swanton, Eastwary	Modify Curves, Widen 24', and Resurface.	1.62	219,125	36,703	17,901	11,420	285,209*
	TOTAL			15.98	\$ 3,548,234	\$ 351,835	\$ 249,758	\$ 326,510	\$ 4,476,337
	GRAND TOTAL			31.48	\$ 6,131,710	\$ 705,063	\$ 433,582	\$ 675,341	\$ 7,945,696
WASHINGTON COUNTY (District No. 6)									
115-1	U. S. 11	Primary Program Projects:	Rehabilitate Present Lane and Add 1—24' Lane.	3.76	\$ 3,129,541	\$ 246,712	\$ 218,556	\$ 401,074	\$ 3,095,883
115-2	U. S. 11	Through Hagerstown (Line "B")	S, P and R W for Acquisition for Dual.			52,555	3,678	535,892	302,125
115-3	U. S. 11	S. Limits of Hagerstown to Williamsport	Construct Dual Highway.			253,609	17,753	89,000	389,292
115-4	U. S. 40	Siding Hill Relocation to Hancock	S/P and R W for Dual, and Construct 1—24' Lane on Relocation.			14,673	1,027	15,000	30,700
115-5	U. S. 40	St. Paul's Church to Hancock	S/P and R W for Dual, Modify Curves, Widen 24', and Resurface—5 miles.			16,042	1,123	17,165	19,304
115-6	U. S. 40	St. Paul's Church to 1 Mile E. of Hycett	R W for Dual, Modify Curves, Widen 24', and Resurface.	4.70	292,344	19,444	15,109	870,000	295,888
115-7	U. S. 40	Through Hagerstown (Line "A")	S, P and R W for Dual Highway.			74,903	10,419	10,419	955,442
115-8	Md. 60	Leathersburg to Penna. Line	Modify Curves, Widen 24', and Resurface.	3.41	712,381	72,584	30,598	115,159	1,011,111
115-9	U. S. 340	Sandy Hook to Frederick County Line	Modify Curves, Widen to 24', and Resurface All Acquire R W for Control.			14,654	1,026	500	16,189
115-10	U. S. 40	Frederick County Line to Hagerstown	Acquire R W for Control.			1,982	118	1,800	1,800
115-11	U. S. 11	Through Hagerstown (Line "B")	Dual Highway and Structures (1st Section)	1.86	2,681,235	179,871	181,838	504,000	3,086,944
115-12	U. S. 40	Through Hagerstown (Line "A")	Dual Highway and Structures (1st Section)		1,528,433	119,329	106,636	1,754,408	1,992,459
115-13	U. S. 40	U. S. 40 to Penna. Line	Acquisition Dual R W, Modify Curves, Widen 24', and Resurface.			514	35	25,000	400
117-16	U. S. 11	Through Hagerstown (Line "B")	Dual Highway and Structures (2nd Section)			30,057	2,105	32,140	32,140
117-17	U. S. 11	At Williamsport	Bridge over Potomac River			28,977	2,028	31,005	30,984
	TOTAL			13.46	\$ 8,253,937	\$ 1,116,706	\$ 693,981	\$ 1,991,625	\$ 11,876,249
119-1	Md. 34	Secondary Program Projects:	Modify Curves, Widen 24', and Resurface	5.73	\$ 1,550,253	\$ 162,250	\$ 111,504	\$ 109,000	\$ 1,638,420
119-2	Md. 34	Sharpsburg to Potomac River	Modify Curves, Widen 24', and Resurface.	3.38	102,772	17,286	9,585	5,000	129,643*
119-3	Md. 67	Alt. U. S. 40, Boonsboro to Rohrserville	Modify Curves and Resurface.			67,065	4,695	75,769	37,920
119-4	Md. 67	Rohrserville to Wewton	Modify Curves, Widen 18' to 24', and Resurface.			52,840	3,790	5,540	57,155
119-5	Md. 58	Hagerstown to Cearless	Modify Curves, Widen 24', and Resurface.	2.86	599,697	41,988	36,729	125,300	773,724
119-6	Md. 62	Hagerstown to Downsville	Modify Curves, Widen 24', and Resurface.	6.79	746,235	76,618	34,438	102,555	959,046
119-7	Md. 64	Chewsville to Penna. Line	Modify Curves, Widen 24', and Resurface.	6.98	1,117,675	129,237	59,554	260,541	1,291,318
119-8	Md. 298	Williamsport to Md. 58	Modify Curves, Widen 24', and Resurface.	4.42	1,110,295	113,553	79,452	255,340	1,558,889
119-9	Md. 418	Leithersburg to Ruigold	Modify Curves, Widen 24', and Resurface.	2.52	569,784	40,064	35,051	76,400	652,392
119-10	Camp Ritchie								
119-10A	Cavetown	Frederick County Line to Appalachian Trail	New Construction 1—24' Lane.	2.46	440,539	36,156	29,919	15,493	522,107
119-11	Md. 60	Leithersburg to Ruigold	Relocating and Surfacing	1.49	299,998	23,688	20,727	1,000	310,513
119-12	Md. 66	U. S. 40 to Cavetown	Modify Curves, Widen 24', and Resurface.			634	66	1,000	7,319
119-13	Md. 68	U. S. 40 to Lappans	Modify Curves, Widen 24', and Resurface.			7,477	523	1,271	8,500
119-14	Md. 68	Lappans to Williamsport	Modify Curves, Widen 24', and Resurface.			7,944	556	8,500	1,271
119-15	Camp Ritchie								
121-19	Cavetown	Appalachian Trail to Cavetown	New Construction 1—24' Lane.	0.78	128,820	47,805	9,531	48,612	234,768
121-19	Md. 57	U. S. 40 to Penna. Line	Modify Curves, Widen 24', and Resurface.			2,894	196	2,000	5,000
	TOTAL			37.41	\$ 6,593,268	\$ 827,709	\$ 436,239	\$ 991,211	\$ 8,818,457
	GRAND TOTAL			59.87	\$14,817,205	\$ 1,944,415	\$ 1,040,220	\$ 2,892,896	\$20,694,706

129-6	U. S. 15	Tuscarora Creek to Pa. Line By-passing Thurmont, Emmitsburg and Lewistown.	8.26	2,007,754	271,512 7,430	147,051 520	420,294 3,000	2,846,611 10,950	2,708,267 11,934
129-7	New U.S. 15	U. S. 340 to Point of Rocks.	5.30	104,441	48,086 3,925	8,702 275	161,229	153,792	153,792
129-8	U. S. 340	Relocation U. S. 40 to Catoctin Relocation.	1.75	199,442	25,631 18,807	1,815 14,167	500 30,000	28,246 262,505	10,980 272,825
129-9	U. S. 340	Catoctin Relocation to Washington County Line	2.28	199,446	13,014 2,991	13,755 209	10,483 5,000	236,698 8,200	217,669 65
129-10	U. S. 340	U. S. 340 to Point of Rocks.							
129-11	U. S. 340	U. S. 340 to Point of Rocks.							
129-12	U. S. 340	U. S. 340 to Point of Rocks.							
129-13	U. S. 40	Alt. U. S. 40 to Washington County Line.							
		TOTAL	28.64	\$ 9,107,416	\$ 1,152,161	\$ 622,533	\$ 472,539	\$ 11,354,649	\$ 8,742,514
133-1	Md. 7	Secondary Program Projects: Woodsboro to Md. 26.	7.09	\$ 802,236	\$ 58,444	\$ 51,138	\$ 286,398	\$ 1,198,216	\$ 794,585
133-2	Md. 77	U. S. 15 to Carroll County Line			25,234	1,766		27,000	5,827
133-3	Md. 79	U. S. 340 to Md. 17			5,327	373		5,700	691
133-4	Md. 17	Potomac River Bridge to Burkittsville	1.11	466,699	36,952	32,333	55,000	590,984	600,275
133-5	Md. 28	U. S. 15 to Montgomery County Line	2.67	57,887	2,144	3,535		63,506	63,506
133-6	Md. 550	Woodsboro to Cresgetown.			20,327	1,423		21,750	3,606
133-7a	Md. 81	U. S. 15 at Thurmont to Sabillasville.			24,205	1,695		25,900	11,655
133-13	Md. 17	Burkittsville to Middletown.			69,350	4,855		71,205	30,657
133-20	Md. 73	Old City Limits of Frederick, Northernly	2.24	232,886	18,631	16,302	17,000	284,819	259,454
133-23	Caretown	Washington County Line to Camp Ritchie.			4,953	347		5,300	126
		TOTAL	13.11	\$ 1,550,708	\$ 265,567	\$ 113,797	\$ 358,398	\$ 2,297,470	\$ 1,830,483
		GRAND TOTAL	41.75	\$ 10,667,124	\$ 1,417,728	\$ 736,330	\$ 830,937	\$ 13,652,119	\$ 10,572,997
137-1	U. S. 1	Howard County District No. 7	10.92	\$ 854,814	\$ 98,068	\$ 65,454	\$ 39,470	\$ 1,057,806*	\$ 1,057,806
137-2	U. S. 1	Resurface and Spot Rehabilitate			1,509	106		1,615	1,179
137-4	Old U.S. 29	1/2 Cost of New Bridge	0.79	196,740	18,471	11,041	100,464	326,716	298,976
		TOTAL	11.71	\$ 1,051,554	\$ 118,048	\$ 76,601	\$ 139,934	\$ 1,386,137	\$ 1,327,661
139-1	Md. 99	Secondary Program Projects:							
139-2	Md. 100	U. S. 40 to Md. 100			5,375	388		5,763*	5,763
139-3	Md. 102	St. Paul Street in Ellicott City	0.63	47,194	1,712	3,007		51,913	53,752
139-4	Md. 103	U. S. 29 to Md. 175	1.66	88,566	21,838	9,070	30,317	149,791	149,791
139-5	Md. 105	U. S. 40 to Md. 100	1.23	62,826	2,916	6,968	16,217	88,927*	88,927
139-6	Md. 175	U. S. 1 to Md. 103	5.06	446,290	35,703	31,241	257,853	771,987	817,375
139-6	Md. 32	Patapsco River at Sykesville to Dayton							
139-6a	Md. 176	U. S. 1 to Annie Arundel County Line	0.91	31,740	78,692	5,508	215,000	299,500	182,940
139-10	Md. 216	U. S. 29 (Highland) to Laurel			2,539	2,222		36,501*	36,501
		TOTAL	9.49	\$ 676,616	\$ 152,981	\$ 58,698	\$ 519,387	\$ 1,407,682	\$ 1,370,931
		GRAND TOTAL	21.20	\$ 1,728,170	\$ 271,029	\$ 135,299	\$ 659,321	\$ 2,793,819	\$ 2,698,592

**GENERAL CONSTRUCTION AND OPERATING FUND
EMERGENCY CONSTRUCTION AND RECONSTRUCTION PROGRAM FUND STATEMENT OF AUTHORIZED EXPENDITURES
AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958**

PROJECT NUMBER	ROUTE NUMBER	LOCATION	DESCRIPTION	AUTHORIZED EXPENDITURES				ACTUAL EXPENDITURES		
				CONSTRUCTION		ENGINEERING	ADMINISTRATIVE AND GENERAL		RIGHTS-OF-WAY	TOTAL (#Final Cost)
				MILES	AMOUNT					
Primary Program Projects:										
ANNE ARUNDEL COUNTY:										
B 60AX-121	U. S. 50	At Cape St. Clair, Bay Head Road	Construct Left Turning Lanes		\$ 2,600	\$ 208	\$ 182	\$ 2,990	\$ 1,698	
AA 518AX-521	Md. 175	At Md. 677	R/W				\$ 6,000	\$ 6,000	\$ 5,124	
AA 521X-521	Md. 175	At Fifth Avenue S. in Glen Burnie	Installation of Traffic Signal		2,988		199	3,187*	3,187	
AA 524X-521	U. S. 30	At Intersection of Old Mill	Construct Two Left Turn Storage Lanes		2,385	72	167	2,624	3,212	
AA 525AX-521	Md. 175	At Elizabeth Avenue Near Rock Creek	R/W		2,300		167	2,467	5,553	
AA 530X-521	Md. 416	At Intersection of Md. 29, Md. 250 at Bristol	Construct Additional Traffic Lane		5,750	191	167	6,108	2,989	
AA 532X-521	Md. 416	At Intersection of Md. 2 and Md. 211 Central Ave.	Installation of Traffic Signal					5,750	5,849	
		Total			\$ 16,113	\$ 471	\$ 715	\$ 13,100	\$ 30,399	
BALTIMORE COUNTY:										
B 60AX-121	Md. 151	At the Intersection of U. S. 10 and Race Road	Installation of Traffic Signal		\$ 3,200			\$ 3,200	\$ 3,979	
B 60AX-121	Md. 151	At the Intersection of North Point Blvd. and Balto. St.	Construct Left Turn Storage Lane		1,557	125	100	1,791	1,764	
B 700X-121	U. S. 40	York, Dulaney Valley, Joppa Roads Intersection	Changeover of Flasher Units		17,835		1,669	19,504*	19,504	
B 712X-121	Md. 29	At Orange Mills, Bridge of Western Md. R. R.	Installation of Flasher Units		513		51	564*	564	
B 714X-121	Md. 29	At Md. 135	Installation of Traffic Signal		5,085		508	5,594*	5,594	
B 716X-121	U. S. 40	At Seminary Avenue	Installation of Traffic Signal		3,726		373	4,099*	4,099	
B 719X-121	U. S. 40	At Golden Ring Road	Revision of Traffic Signal		534		13	547*	577	
B 720X-121	Md. 700	At Elmore's Road	Construct Left Turn Storage Lane		1,280		82	1,362*	1,362	
B 722X-121	Md. 700	At Pennsylvania R. R. Bridge to Middle River Road	Widen & Widenband Lengthening Left Turn Slot		6,529		213	6,742*	6,772*	
B 724X-121	U. S. 40	At Chesico Avenue	Changeover of Traffic Signal		1,765		125	1,890*	1,890	
B 725-121	U. S. 40	At St. Agnes Lane	Nothing Authorized As Yet					6,071	6,071	
B 725X-121	Md. 150	At Harrison Avenue	Installation of Traffic Signal		5,498		385	5,883*	5,883	
B 725X-121	Md. 150	At Golden Ring Road	Nothing Authorized As Yet					1,200	1,200	
B 734X-121	U. S. 40	At Bosley Avenue	Construct Left Turn Storage Lane		1,775	112	121	2,011	1,965	
B 734X-121	U. S. 40	At Golden Ring Road	Installation of Traffic Signal		1,750		31	1,781	1,781	
B 735X-121	Md. 7	Intersection of Falls Road (Md. 25) and Rutxton Road (Md. 134)	Construct Right Turn Lane		7,471	224	523	8,218	8,025	
B 735X-121	Md. 7	Intersection of Hamilton Ave. and Rosedale Ave.	Installation of Traffic Signal		5,000			5,000	5,508	
		Total			\$ 68,344	\$ 491	\$ 4,265	\$ 73,070	\$ 79,522	
CECIL COUNTY:										
CE 468X-221	U. S. 222	At N. End of Port Deposit Underpass	Installation of Flasher		\$ 525			\$ 525	\$ 251	
CE 468X-221	U. S. 40	At Md. 272 Near Northeast	Revision of Traffic Signal		2,500			2,500	2,440	
		Total			\$ 3,025			\$ 3,025	\$ 2,691	

Frederick County: F 608X-721	U. S. 40	Braddock Heights to Washington County Line	Engineering	\$	5,607	\$	363	\$	6,000	\$	5,281
		Aberdeen to Post Road	R/W	\$	5,234	\$	366	\$	40,500	\$	41,513
		Aberdeen toward Bel Air	Preliminary Engineering	\$	5,234	\$	366	\$	40,500	\$	41,513
		TOTAL		\$	23,124	\$	1,740	\$	25,082*	\$	25,082
		At Station 262 and 20	Channelization	\$	1,484	\$	149	\$	1,633*	\$	1,633
		At Annapolis Junction Road	Installation of Signal	\$	6,000	\$		\$	6,000	\$	6,105
		At Intersection of Baltimore National Pike and St. John's Lane	Installation of Signal	\$	6,000	\$		\$	6,000	\$	6,856
		At Intersection of Baltimore National Pike and Rogers Avenue	Installation of Signal	\$	935	\$	65	\$	1,000	\$	1,105
		U. S. 40 to Burtonsville	Aerial Photography	\$	3,271	\$	229	\$	3,500	\$	10
		U. S. 40 to Interchange at Md. 198, Burtonsville	Preliminary Engineering	\$	38,608	\$	2,183	\$	43,215	\$	40,792
		TOTAL		\$	1,010	\$	81	\$	1,162	\$	
		W. of Millington, along Blue Star Memorial Highway	Construct Apron Flares	\$	935	\$	65	\$	1,000	\$	3
		U. S. 40 to Interchange at Md. 198, Burtonsville	Preliminary Engineering	\$	2,467	\$	203	\$	2,670*	\$	2,670
		At Wayne Avenue (Md. 594)	Installation of Traffic Signal	\$	6,261	\$	599	\$	6,811*	\$	6,811
		At Parkland Drive	Half Cost of Installation of Traffic Signal	\$	618	\$	24	\$	6,400*	\$	6,422
		At Md. 198 in Damascus	Installation of Flasher	\$	6,000	\$		\$	6,000	\$	5,121
		At Franklin Avenue (Md. 516)	Installation of Traffic Signal	\$	3,663	\$	293	\$	4,213	\$	4,852
		At U. S. 240	Widen Shoulder on Eastbound Lane	\$	7,000	\$		\$	7,000	\$	6,200
		At Randolph Road	Installation of Traffic Signal	\$	3,000	\$		\$	3,000	\$	3,009
		At the Intersection of Georgia Ave. and Forest Glen Road	Revision of Traffic Signal	\$	935	\$	65	\$	1,000	\$	1,780
		At the Intersection of East-West Highway & Connecticut Avenue	Preliminary Engineering	\$	29,009	\$	1,161	\$	32,336	\$	31,282
		TOTAL		\$	2,764	\$	276	\$	3,040*	\$	3,040
		At Forestville Road	Installation of Traffic Signal	\$	4,139	\$	415	\$	4,558*	\$	4,575
		At Md. 411	Installation of Traffic Signal	\$	7,000	\$		\$	7,000	\$	6,762
		At Decatur Street	Installation of Traffic Signal	\$	1,968	\$	137	\$	2,963	\$	4,541
		At Silver Hill Road	Construct Additional Lane	\$	158	\$	631	\$	9,900	\$	9,271
		Fort Wash. Rd. to 1800' S. of Fort Wash. Rd.	Construct Service Road	\$	4,750	\$		\$	4,750	\$	5,580
		At the Intersection of New Md. 5 and Waterloo Road	Installation of Traffic Signal	\$	1,000	\$		\$	1,000	\$	1,292
		Old Branch Ave. (Md. 381) at Camp Springs	Installation of Flasher Signal	\$	16,940	\$	1,182	\$	19,172	\$	16,751
		150' W. of 73rd Avenue, Westley 1150'	Widening South Side	\$	5,000	\$		\$	5,000	\$	21
		At the Intersection of Queen's Chapel Road and Queensbury Road	Installation of Traffic Signal	\$	500	\$		\$	500	\$	1,536
		At the Intersection of Keulworth Ave. and Decatur St.	Revision of Traffic Signal	\$	53,189	\$	2,642	\$	57,609	\$	53,181
		TOTAL		\$	1,778	\$		\$		\$	

EXHIBIT L, Schedule 2—Concluded

**GENERAL CONSTRUCTION AND OPERATING FUND
EMERGENCY CONSTRUCTION AND RECONSTRUCTION PROGRAM FUND—STATEMENT OF AUTHORIZED EXPENDITURES
AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958**

PROJECT NUMBER	ROUTE NUMBER	LOCATION	DESCRIPTION	AUTHORIZED EXPENDITURES						ACTUAL EXPENDITURES
				CONSTRUCTION		ENGINEERING	ADMINISTRATIVE AND GENERAL	RIGHTS-OF-WAY	TOTAL (\$Final Cost)	
				MILES	AMOUNT					
QUEEN ANNE'S COUNTY:										
Q 380X-221	Md. 390	At Md. 71	Installation of Flasher		\$ 1,000				\$ 1,000	\$ 637
ST. MARY'S COUNTY:										
SM 320-1-521	Causeway on Md. 5	At Point Lookout	Engineering		\$ 107	\$ 33			\$ 500	\$ 250
SM 320-2-521	Causeway on Md. 5	At Point Lookout	Grading, Paving, Slope Protection		4,202	3,755	\$ 5,000		78,417	80,366
SM 351X-521	Md. 246	At Shauger La Drive in Lexington Park	Installation of Traffic Signal		4,759	332			5,078*	5,078
		TOTAL.....			\$ 70,116	\$ 1,120	\$ 5,000		\$ 81,025	\$ 85,703
SOMERSET COUNTY:										
S 207-121	WO 367-121	Md. 413	Engineering		\$ 701	\$ 19			\$ 750	\$ 358
S 207-1-121	WO 367-1-121	Md. 413	Resurface	2.48	\$ 53,838	3,768			59,221	61,458
S 207X-5-121	WO 367-5-121	Md. 413	Grading		31,963	959			33,159	33,496
S 210X-121	WO 367-121	Md. 363	Surface, Widened to 20', and adjust grade	1.75	16,550	3,258			51,205	199
		TOTAL.....		1.23	\$ 132,351	\$ 9,312			\$ 146,335	\$ 95,861
TALBOUR COUNTY:										
T 165-221	BOzman to Neavitt		Engineering		\$ 1,402	\$ 98			\$ 1,500	\$ 6,842
T 165-2-221	BOzman to Neavitt		Preliminary Drainage, Cleaning, and Grubbing				\$ 10,000		10,000	7,440
T 165-2-221	BOzman to Neavitt									13
		TOTAL.....			\$ 1,402	\$ 98	\$ 10,000		\$ 11,500	\$ 14,295
WASHINGTON COUNTY:										
W 451-1-621	Md. 65	In Sharpshurg	Construct Box Culvert, Approaches		\$ 15,887	\$ 2,520			\$ 19,725*	\$ 19,725
W 473-621	Md. 60	Long Meadow Shopping Center	Revision of Drainage System		6,560	450			7,019	8,002
W 474X-621	U. S. 40	At Cleveland Avenue in Hagerstown	Installation of Traffic Signal		1,500				1,500	977
W 475-621	U. S. 40	Alternate U. S. 40 to Boonsboro By-Pass	Preliminary Engineering		3,271	229			3,500	
		TOTAL.....			\$ 17,387	\$ 12,351			\$ 31,744	\$ 28,704
WICOMICO COUNTY:										
WI 303X-121	U. S. 13	At S. Division Street in Salisbury	Installation of Two Poles W/Signs		\$ 1,300				\$ 1,300	

WORCESTER COUNTY: WO 367-421 { Md. 113 S 207-121 { Md. 113 WO 367-1421 { Md. 113 S 207-1121 { Md. 416 WO 368X-121 Md. 416 WO 370X-121 U. S. 50	N. and S. of Newark N. and S. of Newark At Intersections of Md. 298, Md. 259 at Bristol Old U. S. 113 at Berlin	2.79 \$ 60,710 2.415 1,250	\$ 561 \$ 39 1,821 4,251 193 169	\$ 600 \$ 287 66,782 68,303 2,777 2,389 1,280 1,076
TOTAL.....	2.79 \$ 64,375 \$ 2,575 \$ 4,459 7.02 \$ 493,857 \$ 46,008 \$ 31,764	\$ 68,600 \$ 580,302		
TOTAL—PRIMARY PROGRAM PROJECTS				
Secondary Program Projects: BALTIMORE COUNTY: B 717-421 Md. 143 B 730-421 Md. 145	City Property to Md. 146 City Property to Md. 165		\$ 4,000 \$ 3,443 10,000 \$ 4,645	
TOTAL.....		\$ 9,346 \$ 654 \$ 9,346 \$ 654	\$ 4,000 \$ 14,000 \$ 8,088	
CHARLES COUNTY: CH 312-521 Portion of Md. 233	Md. 5 to Prince George's County Line		\$ 2,523 \$ 177	
FREDERICK COUNTY: F 604-721 Md. 17 and Md. 84 F 604-1-721 Md. 17 and Md. 84 F 604X-2-721 Md. 17	Within Myersville Limits Within Myersville Limits In Myersville	1.14 \$ 16,576 1.14 \$ 16,576	\$ 211 \$ 18 914 1,747	\$ 228* \$ 229 19,237* 19,237 1,732* 1,732
TOTAL.....	1.14 \$ 16,576 \$ 1,125 \$ 1,765	\$ 1,732 \$ 1,732	\$ 21,198* \$ 21,198	
MONTGOMERY COUNTY: M 502-321 Md. 118	U. S. 240 to Md. 28		\$ 4,673 \$ 327	\$ 5,000 \$ 343
PRINCE GEORGE'S COUNTY: P 797-1-321 Md. 197	U. S. 1 to U. S. 50		\$ 1,889 \$ 131	\$ 2,000 \$ 3,205
WASHINGTON COUNTY: W 455-2-621 Md. 57	U. S. 40 to Pennsylvania Line			\$ 12,936 \$ 16,301
TOTAL.....	1.14 \$ 29,512 \$ 19,586 \$ 3,054	\$ 5,732 \$ 49,135		
TOTAL—SECONDARY PROGRAM PROJECTS				

Engineering
Resurface
Construct Additional Traffic Lane
Revision of Existing Traffic Signal

R/W
Engineering

Engineering

Engineering

Resurface
Correct Drainage Condition

Engineering

Engineering

Reconstruction

EXHIBIT L, Schedule 3

GENERAL CONSTRUCTION AND OPERATING FUND

INTERSTATE PROJECTS NOT IN TWELVE YEAR-PROGRAM STATEMENT OF AUTHORIZED EXPENDITURES AND ACTUAL EXPENDITURES, BY COUNTIES AND BY PROJECTS, TO JUNE 30, 1958

PROJECT NUMBER	ROUTE NUMBER	LOCATION	DESCRIPTION	AUTHORIZED EXPENDITURES					ACTUAL EXPENDITURES	
				CONSTRUCTION	ENGINEERING	ADMINISTRATIVE AND GENERAL	RIGHTS-OF-WAY	TOTAL		
				MILES	AMOUNT					
Primary Program Projects:										
BALTIMORE COUNTY:										
B 721-423	U. S. 40	Baltimore City Line to Howard County Line	Preliminary Engineering		\$ 2,801	\$ 196	\$ 75,000	\$ 3,000	\$ 1,107	
B 721-1-423	U. S. 40	Baltimore City Line to Pine Orchard	R/W					75,000	1,150	
B 725-1-423	Balto, Wash. Expressway	Balto, City Line to Howard County Line.	R/W				375,000	375,000	145,936	
B 725-2-423	Balto, Wash. Expressway	Passing through Arlor Manor Subdivision	Construct 300' Road Engineering		\$ 2,845	199		3,272	3,301	
ES 278-423	U. S. 40	Patapsco River to St. John's Lane	Engineering		\$ 382,471	\$ 26,356	\$ 450,000	\$ 882,272	\$ 227,709	
TOTAL.....										
HOWARD COUNTY:										
HO 305-723	U. S. 40	Baltimore County Line to Pine Orchard	Preliminary Engineering		\$ 8,000		\$ 65,000	\$ 8,000	\$ 2,100	
HO 305-1-723	New U. S. 40	Baltimore County Line to Pine Orchard	R/W					65,000	70,831	
HO 307-723	Balto, Wash. Expressway	Howard County Line to Prince George's County Line	Preliminary Engineering		11,121	\$ 779		11,900	336	
HO 307-1-723	New Balto.	In Baltimore, Howard, and Prince George's Counties.	Preliminary Engineering		7,664	536		8,200	667	
HO 307-2-723	Wash. Exp.	In Howard County.....	R/W				5,000	5,000	458	
TOTAL.....					\$ 26,785	\$ 1,315	\$ 70,000	\$ 98,100	\$ 71,392	
PRINCE GEORGE'S COUNTY:										
P 790-823	Balto, Wash. Expressway	Howard County Line to Wash. Circumferential Hwy	Preliminary Engineering		\$ 9,346	\$ 651		\$ 10,000	\$ 68	
WASHINGTON COUNTY:										
W 463-623	Relocated	Frederick County Line to Pennsylvania Line	Preliminary Engineering for Surveys						\$ 7,609	
W 463-1-623	U. S. 40	Great Tonoloway Creek to Millstone	R/W				\$ 30,000	\$ 30,000	3,147	
W 463-2-623	U. S. 40	Hancock to Southside of Hagerstown	Subsurface exploration		\$ 21,887	\$ 1,532		23,119	473	
W 463-29-623	New U. S. 40	Millstone to Ridge Road	Soils Exploration of Proposed Roadway						83	
ES 260-623	Relocated	East of Hagerstown to a Point near Hancock	Engineering		1,106,098	77,127		1,183,525	423,085	
TOTAL.....					\$ 1,127,985	\$ 78,959	\$ 30,000	\$ 1,236,944	\$ 431,397	
STATEWIDE:										
AW 694-023		Establish Geodetic Control along Interstate Highway System.....	Engineering		\$ 240,000			\$ 240,000	\$ 180,261	
TOTAL—PRIMARY PROGRAM PROJECTS					\$ 2,845	\$ 1,780,587	\$ 107,881	\$ 550,000	\$ 2,447,316	\$ 925,827

MAINTENANCE FUND

**STATEMENT OF EXPENDITURES FOR THE FISCAL YEARS ENDED
JUNE 30, 1958 AND 1957**

	FISCAL YEAR ENDED JUNE 30	
	1958	1957
MAINTENANCE COSTS, DISTRICTS (Schedules 1 and 2)		
District No. 1	\$ 858,606.11	\$ 688,017.38
District No. 2	1,299,635.67	1,158,602.24
District No. 3	1,378,355.25	1,149,501.21
District No. 4	1,358,780.28	1,068,232.71
District No. 5	1,484,913.25	1,332,306.18
District No. 6	891,125.40	784,549.67
District No. 7	979,896.84	880,379.71
TOTAL	\$8,251,321.83	\$7,061,670.10
MAINTENANCE COSTS, STATE-WIDE PROJECTS	262,442.29	306,223.66
TOTAL	\$8,513,764.12	\$7,367,893.76
ACQUISITION OF CAPITAL PROPERTIES:		
Lands and buildings	\$ 161,821.68	\$ 138,222.83
Engineering equipment	27,916.16	29,076.14
Office equipment	93,470.00	49,891.29
Shop, storeroom, and yard equipment	119,348.46	15,933.39
Snow fences and posts	1,836.64	22,144.54
Transportation—motor vehicles	132,836.51	48,927.05
Road maintenance and construction:		
Motor vehicles	336,649.32	339,758.23
Other	121,764.39	71,858.47
Laboratory equipment	12,388.05	5,199.37
TOTAL	1,008,031.21	721,011.31
OCEAN BEACH PROTECTION	2,288.50	2,000.00
OPERATION AND MAINTENANCE OF WILLIAMSPORT TOLL BRIDGE:		
Salaries and wages, including employee's benefits	\$ 34,159.01	\$ 41,454.24
Materials and supplies	375.27	1,050.29
Payments to Toll Facilities Division—for supervision	5,000.00	3,751.00
Costs transferred from miscellaneous projects	42,643.97	
Portion of equipment service expenses	63.28	83.55
Miscellaneous expenses	7,806.49	5,513.49
TOTAL	90,048.02	51,852.57
REPAIRS AND MAINTENANCE OF RENTAL PROPERTIES		4,763.41
SIGN PERMIT REVENUE FUND:		
Salaries and wages, including employee's benefits	\$ 7,400.01	\$ 10,012.09
Highway beautification	1,010.30	4,774.06
Traveling expenses	733.74	1,382.44
Passenger car operation	756.63	833.05
Costs transferred from miscellaneous projects		8,189.36
Portion of administrative and general expenses	1,758.93	2,972.08
Portion of equipment service expenses	418.36	647.03
Miscellaneous expenses	546.78	2,165.24
TOTAL	12,624.75	31,275.35
TOTAL	\$9,626,756.60	\$8,178,796.40

EXHIBIT M, Schedule 1

MAINTENANCE FUND

STATEMENT OF MAINTENANCE COSTS, BY DISTRICTS, FOR THE FISCAL YEAR ENDED JUNE 30, 1958

	Total	District						
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
PHYSICAL OR GENERAL MAINTENANCE:								
Roads—Surfacing:								
Patching and Draggings	\$1,361,922.78	\$ 53,180.49	\$ 199,794.04	\$ 372,835.01	\$ 188,973.23	\$ 231,502.86	\$ 157,240.88	\$ 161,390.27
Base and Sub-Base Repairs	26,043.53	15,808.59	15,808.59	519.84	519.84	232.79	2,216.32	153.05
Joint Cleaning and Sealing	63,529.20	16,117.01	11,097.59	6,430.64	7,049.78	12,377.21	4,783.40	5,673.87
Dust Preventative	865.42		669.34	27.90		198.68	8.30	
Mud Jack Operations	13,753.30		1,612.42	27.91	5,523.56	1,170.15	2,185.98	2,539.28
Oiling—Bituminous Materials	92,356.28	36,577.54	5,801.32	135.59	8,277.07	12,730.60	16,023.72	11,609.81
Oiling—Cover Materials	256,932.89	121,153.06	8,676.03	29,107.11	17,950.02	43,887.85	18,602.09	17,556.70
Oiling—Sweeping and Rolling	21,720.76	8,137.70	1,440.49	2,222.65	3,742.90	1,229.06	2,714.70	2,253.26
TOTAL—ROADS, SURFACING	\$1,834,154.16	\$ 236,583.84	\$ 244,891.42	\$ 411,480.84	\$ 232,086.40	\$ 303,326.20	\$ 204,675.29	\$ 201,157.17
Roads—Shoulders:								
Patching and Draggings	\$ 684,454.35	\$ 83,705.84	\$ 126,815.74	\$ 81,223.00	\$ 112,530.89	\$ 136,324.43	\$ 74,635.09	\$ 69,123.36
Dust Preventative	3,599.19	2,572.81	38.49	122.76		388.99	189.76	196.38
Oiling—Bituminous Materials	12,816.44	6,564.60	2,853.06	94.70	552.60	2,751.48		
Oiling—Cover Materials	46,403.06	19,977.66	5,043.90		1,380.57	14,128.71	101.20	74.02
Oiling—Sweeping and Rolling	3,015.20	1,592.33	836.77		123.83	438.11	14.16	
TOTAL—ROADS, SHOULDER	\$ 744,202.21	\$ 114,115.24	\$ 135,587.96	\$ 81,440.46	\$ 114,587.89	\$ 154,138.72	\$ 74,940.21	\$ 69,303.76
Road Drainage—Ditches, Drains and Culvert	\$ 549,252.06	\$ 21,913.33	\$ 89,976.77	\$ 80,726.02	\$ 91,436.40	\$ 156,216.41	\$ 51,300.32	\$ 57,673.78
Drainage Structure Repairs Including bridges not over 20-ft. span:								
Bridges and Culverts	\$ 35,468.99	\$ 11,865.98	\$ 9,873.21	\$ 2,540.26	\$ 2,200.47	\$ 919.96	\$ 2,946.36	\$ 5,124.75
Curbs and Gutters	14,844.88	27,451	382.48	2,974.20	8,664.26	183.69	667.74	1,698.00
Catch Basins, Spillways and Ripraping	24,685.31	832.29	6,232.75	4,555.71	6,776.94	2,096.68	455.06	3,735.28
TOTAL—DRAINAGE STRUCTURE REPAIRS	\$ 74,999.18	\$ 12,970.78	\$ 16,488.44	\$ 10,070.17	\$ 17,641.67	\$ 3,200.33	\$ 4,069.76	\$ 10,558.03
Structure Repairs (other than drainage structures):								
Guard Rails	\$ 98,421.01	\$ 3,061.84	\$ 8,222.82	\$ 11,159.55	\$ 19,683.45	\$ 18,839.74	\$ 22,020.19	\$ 15,433.42
Retaining and Slope Walls	4,137.55	2,826.13		128.78	435.10		262.37	485.17
TOTAL—STRUCTURE REPAIRS	\$ 102,558.56	\$ 5,887.97	\$ 8,222.82	\$ 11,288.33	\$ 20,118.55	\$ 18,839.74	\$ 22,282.56	\$ 15,918.59

Roadside and Dividing Parkways:	\$ 642,065.91	\$ 115,298.65	\$ 71,985.80	\$ 95,707.07	\$ 132,698.94	\$ 53,147.49	\$ 87,683.66
Cutting Grass and Clearing Vegetation	112,387.55	5,308.92	19,264.11	25,070.33	16,713.38	17,264.96	18,656.36
Highway Beautification							
Widening, Fills, Cuts, and Resetting Fences, Walls, Borders, Etc.	88,245.22	76,866.29	1,382.16	243.75	6,507.23	112.23	2,657.34
Removal of Debris	226,213.88	37,783.74	48,312.61	37,116.28	39,326.07	21,589.89	27,369.82
TOTAL—ROADSIDE AND DIVIDING PARKWAYS	\$ 1,068,942.56	\$ 255,317.20	\$ 140,944.77	\$ 158,137.43	\$ 195,255.62	\$ 92,121.57	\$ 136,967.18
Bridges (over 20-ft. span):							
Floors and Joists	\$ 13,554.73	\$ 1,243.22	\$ 126.02	\$ 587.19	\$ 1,412.47	\$ 598.34	\$ 4,327.11
Balustrades, Head Walls, Abutments, Piers, Steel Superstructures, and Sidewalks	35,378.74	4,763.26	1,425.58	6,404.37	5,287.73	1,277.38	4,089.08
Painting	6,063.55	376.18	301.67	1,472.98	1,697.34		805.39
Lighting and Telephone Service	24,263.98	4,318.08	1,464.70	2,853.62	6,159.12	1,020.69	97.31
Draw Bridges—Draw Operators	172,221.96	58,827.60		45,917.97			
Draw Bridges—Other Costs	23,500.29	6,253.58			3,033.33		
TOTAL—BRIDGES	\$ 274,983.25	\$ 75,781.41	\$ 3,408.87	\$ 11,318.16	\$ 64,137.96	\$ 2,896.41	\$ 9,319.49
TOTAL—PHYSICAL OR GENERAL MAINTENANCE	\$ 1,649,092.01	\$ 609,788.90	\$ 739,359.46	\$ 645,276.50	\$ 895,118.01	\$ 452,295.12	\$ 500,980.00
TRAFFIC SERVICES:							
Highway Signs and Markers	\$ 379,714.80	\$ 30,157.59	\$ 72,751.28	\$ 61,803.98	\$ 76,735.75	\$ 30,844.52	\$ 43,226.28
Surface Markings and Guide Lines	214,755.08	12,360.91	57,577.01	37,723.23	42,327.26	14,633.82	38,570.94
Snow Removal	848,125.55	34,690.62	149,816.40	185,582.69	151,751.84	98,539.58	105,400.30
Ice Treatment	701,585.72	67,532.12	97,075.67	178,670.11	163,282.41	143,618.54	113,818.54
Traffic Count	23,116.49	2,051.29	1,973.77	5,023.07	5,615.84	2,513.39	3,258.87
Traffic Lights (operating costs)	98,086.74	3,033.05	6,440.20	27,006.12	7,200.24	4,363.42	4,863.22
Erecting and Dismantling Snow Fences	115,954.37	6,046.13	18,512.48	16,325.17	11,391.15	16,364.44	20,881.85
Flood Water Activity, Etc.	10,592.72	224.66	1,320.79	2,077.31	2,671.67	232.53	3,192.73
TOTAL—TRAFFIC SERVICES	\$ 2,391,931.52	\$ 122,888.67	\$ 436,811.63	\$ 514,212.58	\$ 371,975.46	\$ 308,115.97	\$ 335,192.73
INDIRECT CHARGES—PORTION OF ADMINISTRATIVE AND GENERAL EXPENSE	\$ 1,210,298.30	\$ 125,928.57	\$ 202,184.16	\$ 199,300.20	\$ 217,819.78	\$ 130,714.31	\$ 143,716.11
TOTAL	\$ 8,251,321.83	\$ 858,606.14	\$ 1,209,635.67	\$ 1,358,789.28	\$ 1,481,913.25	\$ 801,125.40	\$ 979,896.54

EXHIBIT M, Schedule 2

MAINTENANCE FUND
STATEMENT OF MAINTENANCE COSTS, BY DISTRICTS, FOR THE
FISCAL YEAR ENDED JUNE 30, 1957

	Total	District							No. 7
		No. 1	No. 2	No. 3	No. 4	No. 5	No. 6		
PHYSICAL OR GENERAL MAINTENANCE:									
Roads—Surfacing:									
Patching and Dressing	\$ 1,077,222.58	\$ 513,110.81	\$ 119,701.78	\$ 295,393.96	\$ 132,785.16	\$ 201,205.98	\$ 151,528.29	\$ 122,795.00	
Base and Sub-Base Repairs	16,271.56	3,379.57		612.92	13,257.19	13,257.19	1,728.06	290.22	
Joint Cleaning and Sealing	53,371.35	9,183.82	7,819.24	6,752.18	1,524.79	9,964.37	7,622.10	7,777.55	
Dust Preventative	131.38				387.97		15.61		
Mud-Jack Operations	6,726.33		135.08	1,282.02	2,501.16	2,808.27			
Oiling—Bituminous Materials	107,190.08	9,981.26	18,135.28	18,327.17	2,162.13	38,820.16	11,934.05	4,779.63	
Oiling—Cover Materials	230,828.63	19,780.01	46,115.07	63,271.86	3,712.30	65,586.61	21,859.34	8,493.51	
Oiling—Sweeping and Rolling	16,783.06	1,465.13	1,503.25	4,088.51	653.16	6,240.85	2,267.89	1,015.97	
TOTAL—ROADS, SHOULDERS	\$ 1,509,863.97	\$ 92,003.63	\$ 193,469.70	\$ 391,069.30	\$ 146,981.52	\$ 338,282.60	\$ 202,985.34	\$ 115,071.88	
Roads—Shoulders:									
Patching and Dragging	\$ 844,882.66	\$ 110,896.63	\$ 182,930.08	\$ 63,980.40	\$ 130,405.22	\$ 153,750.03	\$ 78,039.29	\$ 124,573.01	
Dust Preventative	307.70		7.20		13.10	171.56	510.36	207.09	
Oiling—Bituminous Materials	46,215.52	9,375.16	24,447.86		8,216.76	4,123.80		82.24	
Oiling—Cover Materials	68,075.15	15,131.41	39,967.18	9.00	6,927.81	4,159.31	1,837.71	52.24	
Oiling—Sweeping and Rolling	4,394.27	1,329.83	1,788.34		661.02	592.31	40.53	11.62	
TOTAL—ROADS, SHOULDERS	\$ 904,175.90	\$ 136,756.08	\$ 249,100.66	\$ 63,998.40	\$ 146,222.90	\$ 162,806.01	\$ 80,447.89	\$ 124,843.96	
Road Drainage—Ditches, Drains, and Culvert Cleaning	\$ 571,635.02	\$ 38,926.10	\$ 98,001.53	\$ 81,631.17	\$ 89,979.71	\$ 153,696.35	\$ 51,503.61	\$ 57,806.55	
Drainage Structure Repairs (including bridges not over 20-ft. span):									
Bridges and Culverts	\$ 48,563.93	\$ 20,369.04	\$ 13,426.41	\$ 1,311.13	\$ 2,576.71	\$ 867.37	\$ 4,113.51	\$ 5,669.76	
Curbs and Gutters	9,912.75	3,882.21	3,882.21	1,381.02	6,664.27	396.20	601.73	378.23	
Catch Basins, Spillways, and Riprapping	24,957.11	3,912.75	2,463.67	5,054.18	6,173.22	3,607.56	351.19	3,392.54	
TOTAL—DRAINAGE STRUCTURE REPAIRS	\$ 83,433.79	\$ 24,281.79	\$ 16,278.29	\$ 7,846.33	\$ 15,616.20	\$ 4,871.22	\$ 5,069.43	\$ 9,440.53	
Structure Repairs (other than drainage structures):									
Guard Rails	\$ 105,895.19	\$ 1,889.30	\$ 7,498.27	\$ 12,880.05	\$ 27,322.74	\$ 24,609.69	\$ 12,764.80	\$ 18,730.64	
Retaining and Slope Walls	3,613.86	81.07	34.97	1,261.96	769.28	5.61	147.86	1,373.11	
TOTAL—STRUCTURE REPAIRS	\$ 109,509.35	\$ 1,970.37	\$ 7,533.24	\$ 14,142.01	\$ 28,232.02	\$ 24,615.30	\$ 12,912.66	\$ 20,103.75	

Roadside and Dividing Parkways: Cutting Grass and Clearing Vegetation.....	\$ 681,146.04	\$ 86,312.12	\$ 114,028.46	\$ 73,839.58	\$ 107,685.73	\$ 130,269.54	\$ 63,315.84	\$ 108,694.77
Highway Beautification.....	105,052.61	4,020.46	15,084.46	9,792.91	24,864.24	27,413.32	10,658.22	12,318.90
Widening, Fills, Cuts, and Resetting Fences, Walls, Borders, Etc. Removal of Debris.....	41,721.31	853.94	30,309.47	2,203.57	96.83	6,474.27	1,507.23	2,166.00
	225,972.74	14,836.80	39,163.60	45,642.57	33,993.61	31,535.90	28,138.70	28,361.56
TOTAL—ROADSIDE AND DIVIDING PARKWAYS.....	\$1,053,592.70	\$ 106,013.32	\$ 199,485.99	\$ 131,478.63	\$ 166,640.41	\$ 198,693.13	\$ 103,689.99	\$ 147,591.23
Bridges (over 20-ft. span): Floors and Joints.....	\$ 18,620.04	\$ 7,250.96	\$ 5,917.19		\$ 840.23	\$ 820.13	\$ 1,073.61	\$ 2,717.92
Balustrades, Head Walls, Abutments, Piers, Steel Superstructures, and Sidewalks.....	12,472.01	8,270.09	1,682.32	168.12	408.59	925.66	749.73	1,367.50
Painting.....	2,311.18	123.31	636.15	31.63	1,124.70	50.05	72.72	275.62
Lighting and Telephone Service.....	31,482.73	8,179.74	7,098.15	2,128.98	5,080.51	7,520.60	1,073.89	100.86
Draw Bridges—Draw Operators.....	159,265.63	64,511.84	51,415.65			43,338.44		
Draw Bridges—Other Costs.....	9,880.83	3,017.71	4,063.42			2,799.70		
TOTAL—BRIDGES.....	\$ 234,232.72	\$ 91,353.65	\$ 70,812.88	\$ 2,328.73	\$ 7,451.03	\$ 54,854.58	\$ 2,969.95	\$ 4,461.90
TOTAL PHYSICAL OR GENERAL MAINTENANCE.....	\$4,526,443.45	\$ 491,504.94	\$ 834,682.29	\$ 692,494.57	\$ 601,123.79	\$ 937,819.19	\$ 459,698.87	\$ 509,499.80
TRAFFIC SERVICES: Highway Signs and Markers.....	\$ 405,708.39	\$ 39,444.68	\$ 54,168.77	\$ 63,934.55	\$ 75,505.59	\$ 78,226.63	\$ 31,591.79	\$ 62,836.38
Surface Markings and Guide Lanes.....	188,372.99	14,126.53	12,398.88	51,971.05	38,944.74	14,864.04	20,217.51	35,847.24
Snow Removal.....	173,511.26	16,851.07	11,845.68	25,855.57	32,090.62	33,652.51	31,630.18	21,285.60
Ice Treatment.....	456,371.93	16,222.60	36,434.99	83,829.92	108,500.55	29,809.05	97,953.69	83,621.13
Traffic Count.....	24,275.77	3,103.05	1,919.33	2,428.36	5,073.52	5,044.98	4,130.43	2,576.10
Traffic Lights (operating costs).....	74,283.48	1,529.07	4,146.98	26,513.65	20,925.76	15,077.04	591.75	2,499.23
Erecting and Dismantling Snow Fences.....	119,750.26	5,474.46	25,198.07	20,671.17	15,477.80	12,021.96	16,570.85	24,335.95
Flood Water Activity, Etc.....	76,525.30	930.63	11,042.89	13,347.98	16,839.39	13,801.22	9,329.79	11,242.40
TOTAL—TRAFFIC SERVICES.....	\$1,518,799.38	\$ 97,682.09	\$ 157,155.59	\$ 291,552.25	\$ 313,351.97	\$ 202,797.46	\$ 212,015.99	\$ 244,244.03
INDIRECT CHARGES—PORTION OF ADMINISTRATIVE AND GENERAL EXPENSES.....	1,016,427.27	99,030.35	166,764.36	165,451.39	153,756.95	191,779.53	112,924.81	126,716.88
TOTAL.....	\$7,091,670.10	\$ 688,017.38	\$1,135,692.24	\$1,146,501.21	\$1,068,232.71	\$1,332,396.18	\$ 784,549.67	\$ 890,370.71

EXHIBIT N

COUNTY CONSTRUCTION FUNDS

STATEMENT OF PROJECT EXPENDITURES FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

DATE AUTHORIZED	PROJECT NUMBER	LOCATION	DESCRIPTION	Work IN PROGRESS JULY 1, 1956	FISCAL YEAR 1957	FISCAL YEAR 1958	AUTHORIZED TO COMPLETE PROJECTS IN PROGRESS, JUNE 30, 1958	TOTAL	
6-9-54	A 446-2	Mt. Savage School Road from Md. 36 to New School	ALLEGANY COUNTY .848 mi. grading, drainage, and surfacing—bituminous concrete; acquisition of right-of-way (including preliminary engineering) Construction of steel beam bridge; .928 mi. grading, drainage, and surfacing of approaches—spec. "B"; acquisition of right-of-way Relocating poles Right-of-way adjustment Engineering services of Green Associates, Inc.	\$ 361,198.11	\$ 50,376.11		*	\$ 411,874.22	
9-27-55	A 466	County Road connecting Md. 51 with Pittsburgh Plate Glass Plant in North Branch		123,318.05	27,409.25	\$ 106,183.48	*	503,595.78	
4-24-56	A 466-2	County Road connecting Md. 51 with Pittsburgh Plate Glass Plant in North Branch		191.73		1,175.04	*	1,366.77	
1-30-58	A 466-3	B. & O. R. R. at North Branch				6,250.75		6,250.75	
12-9-54	E.S. 245	County Road connecting Md. 51 with Pittsburgh Plate Glass Plant in North Branch		19,218.41		4,881.35	\$ 1,236.50		25,336.35
			Total	\$ 504,226.30	\$ 324,170.36	\$ 118,499.62	\$ 1,236.50	\$ 948,132.87	
11-29-57 7-10-57	AA 519-1 AA 525	Bridge over Deep Creek on Hanover Road South River County bridge at Riva	ANNE ARUNDEL COUNTY Construction of concrete beam bridge Preliminary engineering			\$ 26,153.19	\$ 1,367.46 500.00	\$ 27,520.65 500.00	
				Total			\$ 26,153.19	\$ 1,867.46	\$ 28,020.65
9-17-54	C 221X	Clay Hammond Road from Md. 402 toward Md. 2	CALVERT COUNTY 1.3 mi. grading, drainage, and surfacing—gravel surface course 1.1 mi. grading and bituminous surface treatment	\$ 5,357.61	\$ 1,506.58		*	\$ 6,864.19	
10-2-57	C 230X	Willows Beach Road from Md. 261 to Willows Beach				\$ 5,739.62	\$ 12,760.38	\$ 18,500.00	
			Total	\$ 5,357.61	\$ 1,506.58	\$ 5,739.62	\$ 12,760.38	\$ 25,364.19	
4-19-56 4-19-56 4-19-56 4-19-56	C 260X C 261X C 262X C 263X	Caroline County Md. 401 to Bloomery Cross Road Mt. Zion to Kanes Cross Roads Ridgely to Cross's Mill Marsh Creek to Poplar Neck Road	CAROLINE COUNTY Federal Aid allotment—secondary program 2.8 mi. surface treatment 2.4 mi. surface treatment 16 mi. surface treatment 1.65 mi. surface treatment			\$ 49,249.00	*	\$ 49,249.00	
				\$ 10,180.67				*	10,180.67
				8,049.48				*	8,049.48
				2,381.91				*	2,381.91
				4,994.91				*	4,994.91
			Total	\$ 25,693.97		\$ 49,249.00		\$ 74,858.97	
		Carroll County	CARROLL COUNTY Federal Aid allotment—secondary program			\$ 7,851.00		\$ 7,851.00	
				Total			\$ 7,851.00		\$ 7,851.00

8-8-57	Q 364X	Leiby Road	9 mi. surface treatment	\$ 75,929.06	\$ 81,661.38	1,562.11	2,174.09	3,766.20
8-8-57	Q 365X	Murphy Road	1.6 mi. surface treatment			6,964.63	6,713.37	13,678.00
8-8-57	Q 366X	Bolton Woods Road	.7 mi. surface treatment			2,101.88	2,282.12	3,894.00
8-8-57	Q 367X	Rolph's Wharf Road	.5 mi. surface treatment			1,576.64	1,142.51	2,719.15
8-8-57	Q 368X	White Marsh Road	2 mi. surface treatment			8,388.02	3,598.52	11,986.54
	Q 377	Millington Road	.7 mi. gravel surfacing			1,489.60		1,483.60
		Total		\$ 75,929.06	\$ 81,661.38	\$ 67,891.93	\$ 32,580.89	\$ 278,072.26
ST. MARYS COUNTY								
11-23-55	SM 321X	Sandy Bottom—St. John's Church Road	1.1 mi. grading, drainage, and gravel surfacing	\$ 5,920.14			*	\$ 5,920.14
11-23-55	SM 322X	Drum Cliff Road	.6 mi. grading, drainage, and gravel surfacing	8,711.17			*	8,706.70
11-23-55	SM 323X	St. George's Church Road, Mech.—Trent Beach Road, Locks Crossing Road, Parsons Hill Road, Joy Chapel—Red Hill Road, Sandgates Road, Jarboesville-Willows Road, Myrtle Point—Town Point Road and Sypher Macon Road	17.1 mi. initial bituminous surface treatment	3,319.01			*	3,319.01
				24,409.77			*	24,406.77
11-23-55	SM 327X	Rose Croft Road	1 mi. grading, drainage, and gravel surfacing	7,181.51	967.17		*	6,214.34
11-23-55	SM 328X	Rose Croft Road	1.1 mi. grading, drainage, and gravel surfacing	9,201.93	379.27		*	8,822.66
11-23-55	SM 329X	Chaplico Wharf Road	.6 mi. grading, drainage, and gravel surfacing	2,401.40	2,496.09		*	4,897.49
11-23-55	SM 330X	Chaplico Wharf Road	.7 mi. grading, drainage, and gravel surfacing	3,275.33	1,871.53		*	5,146.86
11-23-55	SM 331X	Sugar Bowl Road	.6 mi. grading, drainage, and gravel surfacing	2,058.08	2,808.15		*	4,866.23
11-23-55	SM 332X	Sugar Bowl Road	.75 mi. grading, drainage, and gravel surfacing	2,801.28	2,237.08		*	4,737.36
11-23-55	SM 333X	Oaks—Charles County line	.3 mi. grading, drainage, and gravel surfacing	2,319.55			*	2,319.55
11-23-55	SM 334X	Pegg Road	.5 mi. grading, drainage, and gravel surfacing	898.59	351.70		*	1,250.29
3-27-57	SM 337X	Mechanicsville-Thompsons Corner Road	1.8 mi. surface treatment	1,299.67			*	1,299.67
3-27-57	SM 338X	Lexington Park—Willows Road	2.1 mi. surface treatment	2,512.89		2.80	*	2,516.69
3-27-57	SM 339X	Mechanicsville—Trent Hall Road	1.3 mi. surface treatment	2,237.32			*	2,237.32
3-27-57	SM 340X	Md. 244 to Great Mills Drayden Road	1 mi. surface treatment	1,023.63			*	1,023.63
3-27-57	SM 341X	Md. 235 to Sandgates	.6 mi. surface treatment	533.09			*	533.09
3-27-57	SM 342X	Md. 243 to Rosebank	2 mi. surface treatment	2,036.31			*	2,036.31
3-27-57	SM 343X	Md. 244 to Bretton Beach	1.2 mi. surface treatment	1,120.72			*	1,120.72
3-27-57	SM 344X	Md. 247 to Md. 235	1 mi. surface treatment	912.59			*	912.59
3-27-57	SM 345X	California—Myrtle Point Road	2.4 mi. surface treatment	2,195.19			*	2,195.19
3-27-57	SM 346X	Myrtle Point Road—Sypher Road	1.6 mi. surface treatment	1,644.82			*	1,644.82
3-27-57	SM 347X	Md. 5 to Charles County line	.9 mi. surface treatment	968.80			*	968.80
3-27-57	SM 348X	Md. 5 to Charles County line	.3 mi. surface treatment	528.82			*	528.82
3-27-57	SM 349X	Jones Wharf to Drum Cliff	1 mi. surface treatment	1,921.80			*	1,921.80
3-27-57	SM 350X	Md. 5 to Rosecroft	1.25 mi. surface treatment	2,277.69			*	2,277.69
3-27-57	SM 351X	Md. 242 to Md. 470	2.1 mi. surface treatment	3,824.20			*	3,824.20
3-27-57	SM 352X	Md. 238 to Chaptico Wharf	1.35 mi. surface treatment	2,572.08			*	2,572.08
3-27-57	SM 353X	Sotterly Heights Road	1.25 mi. surface treatment	2,197.95			*	2,197.95
5-8-57	SM 355X	Morgauza—Grave Yard Road	.7 mi. reconstruction		884.97	5,209.23	*	5,209.23
5-8-57	SM 356X	Hodges Road	.7 mi. surface treatment			3,188.97	*	3,188.97
5-8-57	SM 357X	Pegg Road	1.4 mi. surface treatment		1,371.52	5,635.82	*	4,073.94
5-8-57	SM 358X	Pegg Road	.5 mi. surface treatment			3,869.38	*	3,869.38

(Continued next page)

EXHIBIT N Concluded

COUNTY CONSTRUCTION FUNDS

STATEMENT OF PROJECT EXPENDITURES FOR THE FISCAL YEARS ENDED JUNE 30, 1957 AND 1958

DATE AUTHORIZED	PROJECT NUMBER	LOCATION	DESCRIPTION	WORK IN PROGRESS JULY 1, 1956	FISCAL YEAR 1957	FISCAL YEAR 1958	AUTHORIZED TO COMPLETE PROJECTS IN PROGRESS, JUNE 30, 1958	TOTAL
			ST. MARY'S COUNTY (Continued):					
5-8-57	SM 359X	St. George's Island Road	.5 mi. surface treatment		137.79		\$ 2,921.21	\$ 3,059.00
5-8-57	SM 360X-1	Bay Forest Road	2 mi. grading, drainage, and surfacing, pit run gravel	8,882.15	2,585.19		*	11,467.34
5-8-57	SM 361X	St. Michaels Road	.23 mi. surface treatment	1,719.91			*	1,719.91
5-8-57	SM 362X	Lane Road	.75 mi. surface treatment	1,310.91	2,939.24		*	4,250.15
5-8-57	SM 363X	Delbrook Road	1 mi. surface treatment	5,429.94			*	5,429.94
5-8-57	SM 364X	Long Road	1 mi. surface treatment	1,696.82	1,715.70		*	3,412.52
10-2-57	SM 365X	Oak Road, Sugar Bowl Road, Chapter Road and Rosecroft Road	Second surface treatment		4,612.60		*	4,612.60
10-2-57	SM 366X	Scotch Neck Road	1.1 mi. surface treatment		38.91		5,019.65	5,058.56
10-2-57	SM 367X	Court House Drive	.26 mi. surface treatment		1,797.18		*	1,797.18
10-2-57	SM 370X	Queen Tree Road	1 mi. surface treatment		1,819.55		4,030.78	5,850.33
10-2-57	SM 371X	Frog Marsh Road	1.7 mi. reconstruction (clearing and grading)		1,008.70		1,817.20	5,825.90
10-2-57	SM 371X-1		1.7 mi. reconstruction (drainage and surfacing)				5,806.35	5,806.35
10-23-57	SM 373	Patauxent Beach Road at Seven Gables Hotel	Preliminary engineering				200.00	200.00
11-29-57	SM 374X	Delbrook Road	1.35 mi. reconstruction (clearing and grading)		1,709.90		3,033.85	4,743.75
11-29-57	SM 375X	Delbrook Road	1.35 mi. reconstruction (surfacing and drainage)				4,738.92	4,738.92
11-29-57	SM 376X	California Post Office Road	.8 mi. surface treatment		2,182.24		5,881.22	5,881.22
11-29-57	SM 377X	Hermansville to Park Hall Road	1.5 mi. reconstruction (clearing)		3,846.26		897.49	1,743.75
11-29-57	SM 378X	Hermansville to Park Hall Road	1.5 mi. reconstruction (grading and drainage)				4,310.56	5,951.83
11-29-57	SM 379X	Hermansville to Park Hall Road	1.5 mi. reconstruction (surfacing)				4,310.56	4,310.56
11-29-57	SM 380X	Poplar Neck Road	.5 mi. surface treatment		1,438.11		2,426.35	3,864.46
11-29-57	SM 381X	Little Snow Hill Road	.92 mi. surface treatment		2,625.18		3,298.47	5,923.65
1-30-58	SM 383X	Town Creek Road	1.5 mi. reconstruction (clearing and grading)				4,960.81	4,960.81
4-30-58	SM 383X-1	Town Creek Road	1.5 mi. reconstruction (drainage and surfacing)				5,405.58	5,405.58
			Total	\$ 72,363.76	\$ 60,433.64	\$ 52,452.75	\$ 58,518.03	\$ 243,798.18
			SOMERSET COUNTY					
			Federal Aid appropriation—secondary program		\$ 18,271.00	\$ 3,279.00		\$ 21,550.00
			WASHINGTON COUNTY					
			Federal Aid appropriation—secondary program		\$ 7,740.00		*	\$ 7,740.00
			Installation of flasher light crossing signals at railroad crossing	2,802.05	889.95	102,181.96		2,892.05
			3.05 mi. grading, drainage, and surfacing—spec. "B"					193,071.91
			Total	\$ 11,432.00	\$ 102,181.96			\$ 203,613.96

EXHIBIT O

FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954, RELATING TO BRIDGE AND TUNNEL

REVENUE BONDS

BALANCE SHEET, SEPTEMBER 30, 1958

	TOTAL	MARYLAND TOLL REVENUE PROJECTS					PATAPSCO TUNNEL CONSTRUCTION ACCOUNT	BONDED DEBT	
		REVENUE FUND	OPERATIONS RESERVE FUND	BOND SERVICE ACCOUNT	SINKING FUND				BRIDGE CONSTRUCTION ACCOUNT
					RESERVE ACCOUNT	REDEMPTION ACCOUNT			
ASSETS									
Cash On Deposit (See Note):									
Fidelity-Baltimore National Bank	\$ 3,999,746.97	\$ 402,320.00	\$ 97,808.05	\$ 1,033,098.37	\$ 11,681.87	\$ 1,170,426.25			
County Trust Company	50,000.00					50,000.00			
CASH IN HAND—UNDEPOSITED COLLECTIONS	19,250.20	19,250.20							
REVOLVING FUND:									
For Payment of Costs and Expenses:	25,000.00								
For Payment of Current Expenses:	58,150.00								
For Making Change:	66,850.00								
CASH WITH STATE ROADS COMMISSION OF MARYLAND	171,298.74								
INVESTMENTS IN UNITED STATES OBLIGATIONS AT COST									
CHARITY DEPOSITS WITH FIDELITY-BALTIMORE	26,144,786.50		3,346,645.16		9,306,458.13				
NATIONAL BANK TRUSTEE	6,000.00	6,000.00					13,491,683.61		
ACCOUNTS RECEIVABLE:									
Toll Tickets	1,802.15	1,802.15							
Toll Charges	6,941.65	6,941.65							
CAPITAL PROPERTIES:									
Susquehanna River Toll Bridge	4,702,861.84					4,702,861.84			
Potomac River Toll Bridge	5,628,250.06					5,628,250.06			
Chesapeake Bay Toll Bridge	45,355,588.45					45,355,588.45			
Patapsco Tunnel Project	134,381,071.33						134,381,071.33		
Northern Approach Extension	1,026,091.47						1,026,091.47		
FUTURE TOLL BRIDGE AND TUNNEL REVENUE ENCLIN- GEMENT AND PORTION OF EXISTING SINKING FUND AVAILABLE FOR PAYING PRINCIPAL OF BRIDGE AND TUNNEL REVENUE BONDS	162,933,000.00						\$162,933,000.00		
TOTAL ASSETS	\$84,636,689.76	\$ 591,314.00	\$ 3,444,453.21	\$ 1,033,098.37	\$ 9,318,140.00	\$ 1,284,412.43	\$162,933,000.00		

LIABILITIES									
RESERVES CREATED UNDER ARTICLE V OF TRUST AGREEMENT:									
For Operating Expenses and Other Costs		\$ 3,882,467.81	\$ 438,014.60	\$ 3,444,453.21					
For Requirements of Maryland Toll Revenue Projects—Interest and Sinking Fund		11,635,650.80			\$ 9,318,140.00	\$ 1,284,412.43			\$ 3,124,665.77
RESERVES FOR PATASCO TUNNEL CONSTRUCTION COSTS: For Encumbrances Account of Contract Awards For Further Costs		3,124,665.77							11,612,444.09
		11,612,444.09							
RESERVES CREATED WITH CHESAPEAKE BAY FERRY SYSTEM FUNDS:									
For Chesapeake Bay Bridge Costs		165,702.01							\$ 165,702.01
For Possible Ticket Refunds		5,596.73							5,596.73
OTHER RESERVES:									
For Guaranty Deposits		6,000.00							
For Toll Tickets Sold for Future Use		147,299.40	6,000.00						
BONDS PAYABLE ONLY FROM REVENUE OF BRIDGES AND TUNNEL			147,299.40						
		162,493,000.00							\$162,493,000.00
STATE EQUITY REPRESENTED BY:									
Portion of Bond Proceeds, Net Investment Income and Project Revenues Invested In:									
Susquehanna River Toll Bridge:									
Susquehanna River Toll Bridge		2,546,642.56							2,546,642.56
Potomac River Toll Bridge		3,453,280.06							3,453,280.06
Chesapeake Bay Toll Bridge		45,064,240.46							45,064,240.46
Patasco Tunnel Project		135,407,162.80							135,407,162.80
Federal Grant Invested in Susquehanna River Toll Bridge:									
Federal Grant Invested in Potomac River Toll Bridge		1,979,219.28							1,979,219.28
Federal Grant Invested in Chesapeake Bay Ferry System Funds Invested in Chesapeake Bay Toll Bridge		2,351,970.00							2,351,970.00
		321,347.99							321,347.99
		\$384,636,689.76	\$ 591,314.00	\$ 3,444,453.21	\$ 1,033,098.37	\$ 9,318,140.00	\$ 1,284,412.43	\$ 55,887,999.09	\$150,144,272.66
TOTAL LIABILITIES									

NOTE.—The Trustee informed the Commission that as of September 30, 1958, the Trustee, or custodians approved by the Trustee, held as collateral security for the deposits of funds shown above, securities having a market value (exclusive of accrued interest) at least equal to the amount of each such deposit. The aforementioned securities consisted of direct obligations of the United States Government or obligations of the principal and interest of which are unconditionally guaranteed by the United States Government, or other marketable securities eligible as security for deposits of trust funds under regulations of the Board of Governors of the Federal Reserve System or eligible as security for the deposit of funds of the State of Maryland.

EXHIBIT O, Schedule 1

**FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS
STATE OF MARYLAND BRIDGE AND TUNNEL REVENUE BONDS
(PAYABLE SOLELY FROM REVENUES OF BRIDGES AND TUNNEL),
SEPTEMBER 30, 1958**

MATURITY	PRINCIPAL AMOUNT	INTEREST RATE
SERIAL BONDS:		
October 1, 1960	\$ 1,920,000.00	1.75%
October 1, 1961	1,980,000.00	1.80%
October 1, 1962	2,040,000.00	1.90%
October 1, 1963	2,100,000.00	2.00%
October 1, 1964	2,170,000.00	2.10%
October 1, 1965	2,240,000.00	2.25%
October 1, 1966	2,310,000.00	2.30%
October 1, 1967	2,380,000.00	2.40%
October 1, 1968	2,450,000.00	2.50%
October 1, 1969	2,530,000.00	2.50%
October 1, 1970	2,610,000.00	2.60%
October 1, 1971	2,690,000.00	2.60%
October 1, 1972	2,770,000.00	2.70%
October 1, 1973	2,860,000.00	2.70%
October 1, 1974	2,950,000.00	2.70%
TERM BONDS:		
October 1, 1991	126,933,000.00	3.00%
TOTAL	\$162,933,000.00	

FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS

STATEMENT SHOWING CHANGES DURING THE FISCAL YEAR ENDED SEPTEMBER 30,
1958, IN RESERVES CREATED UNDER ARTICLE V OF TRUST AGREEMENT
DATED OCTOBER 1, 1954

	MARYLAND TOLL REVENUE PROJECTS				
	REVENUE FUND	OPERATIONS RESERVE FUND	SINKING FUND		
			BOND SERVICE ACCOUNT	RESERVE ACCOUNT	REDEMPTION ACCOUNT
BALANCE, OCTOBER 1, 1957	\$ 153,381.53	\$4,052,657.76	\$ 425,090.00	\$9,892,781.43	\$1,035,708.30
ADDITIONS:					
Total Income	\$11,651,030.23				
Income from Investments		\$ 134,355.54	\$ 49,361.95	\$ 334,629.66	
Proceeds from sale of property		160.16			
Proceeds from sale of plans and specifications		135.00			
Property damage recovery		4,268.24			
Transfer from Patapsco Tunnel Construction Fund to provide for Term Bond Interest payable April 1, 1958			2,042,190.00		
Transfer from Patapsco Tunnel Construction Fund to provide for Term Bond Interest payable October 1, 1958			1,983,735.00		
Transfer from Reserve Account					\$ 909,271.09
Transfer from Maryland Toll Revenue Projects Revenue Fund		99,289.03	1,334,255.53		8,432,535.54
TOTAL ADDITIONS	\$11,651,030.23	\$ 238,207.97	\$5,409,542.48	\$ 334,629.66	\$9,341,806.63
TOTAL	\$11,804,411.76	\$4,290,865.73	\$5,834,632.48	\$10,227,411.09	\$10,377,514.93
DEDUCTIONS:					
Expenses, excluding General and Administrative Expenses	\$1,276,145.12	\$ 535,473.49			
General and Administrative Expenses	224,171.94	8,727.33			
Expenditures for Patapsco Tunnel Northern Approach Extension:					
Legal and Administrative		160.48			
Construction		295,218.37			
Engineering		6,832.85			
Transfer to Interest and Sinking Fund:					
Bond Service Account	1,334,255.53				
Redemption Account	8,432,535.54				
Transfer to Operations Reserve Fund	99,289.03				
Transfer to Redemption Account				\$ 909,271.09	
Bridge and Tunnel Revenue Term Bonds purchased					\$9,064,317.50
Premium paid on Bridge and Tunnel Revenue Term Bonds purchased					28,785.00
Accrued interest paid on Bridge and Tunnel Revenue Term Bonds purchased			\$ 63,624.11		
Interest due April 1, 1958			2,408,825.00		
Interest due October 1, 1958			2,329,085.00		
TOTAL DEDUCTIONS	\$11,366,397.16	\$ 846,412.52	\$ 4,801,534.11	\$ 909,271.09	\$9,093,102.50
BALANCE, SEPTEMBER 30, 1958	\$ 438,014.60	\$3,444,453.21	\$1,033,098.37	\$9,318,140.00	\$1,284,412.43

**FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS**
**STATEMENT OF INCOME AND EXPENSES OF SUSQUEHANNA RIVER, POTOMAC
RIVER, AND CHESAPEAKE BAY TOLL BRIDGES, AND PATAPSCO TUNNEL**
FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1958

	TOTAL	SUSQUEHANNA RIVER TOLL BRIDGE	POTOMAC RIVER TOLL BRIDGE	CHESAPEAKE BAY TOLL BRIDGE	PATAPSCO TUNNEL
INCOME:					
Toll income based on toll transactions:					
Cash tolls	\$10,745,373.70	\$1,759,509.90	\$2,138,293.00	\$3,773,954.45	\$3,073,616.35
Ticket tolls	791,902.45	217,025.25	22,459.90	221,363.75	331,053.55
Charge tolls	65,196.10	316.80	10,570.60	53,886.70	122.00
Total toll income based on toll transactions	\$11,602,472.25	\$1,976,851.95	\$2,171,323.50	\$4,049,204.90	\$3,405,691.90
Collections in excess of calculated tolls—net	2,037.83	441.70	403.70	527.35	665.08
Unredeemed toll tickets issued from October 1, 1954 through September 30, 1955	35,524.67	15,662.87	1,879.70	17,982.10	2,741.00
Sale of stickers for use with commutation tickets	5,849.50	2,551.50		554.00	
Deposit on commutation tags, transferred from reserve	3,822.50	3,134.50		688.00	
Miscellaneous revenue	1,323.48	29.42	31.42	106.59	1,156.05
TOTAL INCOME	\$11,651,030.23	\$1,998,674.94	\$2,173,638.32	\$4,069,062.91	\$3,409,654.03
EXPENSES, EXCLUDING ADMINISTRATIVE AND GENERAL EXPENSES:					
Operating—					
Revenue Fund:					
Salaries	\$ 886,716.66	\$ 172,059.22	\$ 90,708.79	\$ 138,139.52	\$ 485,809.13
Electricity for lighting	78,944.05	4,423.11	3,060.04	5,343.24	66,117.66
Fuel for heating	9,016.24	2,040.01	516.54	2,088.63	4,371.06
Printing, including toll tickets	14,022.33	7,004.14	983.20	3,356.04	2,678.95
Automobile expenses, including employees' meals	8,412.82	87.07	458.85	342.12	7,524.78
Supplies	10,859.05	2,965.14	665.46	1,435.78	5,792.67
Telephone	10,466.15	2,049.19	2,052.19	2,156.38	4,208.39
Uniforms	1,195.92	1,757.83	594.83	931.40	911.86
Armored car service	2,721.88			2,001.88	720.00
Other	25,176.25	6,920.42	4,127.91	10,633.42	3,494.47
Maintenance:					
Revenue Fund:					
Salaries	163,941.64	11,821.05	10,816.45	12,026.23	96,247.91
Materials and other expenses	50,300.43	5,945.34	1,935.31	12,449.32	29,970.46
Independent contractors	10,399.22	116.32	34.37	1,463.93	8,484.60
Insurance	972.48	110.62	201.12	360.74	
Operations Reserve Fund:					
Materials and other expenses	31,158.61		20.58	31,138.03	
Insurance	315,203.65	49,649.66	52,583.57	201,399.66	11,570.76
Capital properties acquired—renewals	189,111.23	166,618.99	4,571.13	16,429.89	1,491.22
TOTAL EXPENSES, EXCLUDING ADMINISTRATIVE AND GENERAL EXPENSES:					
Revenue Fund	\$1,276,145.12	\$ 220,899.46	\$ 116,185.09	\$ 222,728.63	\$ 716,331.94
Operations Reserve Fund	535,473.49	216,268.65	57,175.28	248,957.58	13,061.98
TOTAL	\$1,811,618.61	\$ 437,168.11	\$ 173,360.37	\$ 471,686.21	\$ 729,393.92
NET OPERATING INCOME	\$9,839,411.62	\$1,561,506.83	\$2,000,277.95	\$3,597,376.73	\$2,680,260.11
ADMINISTRATIVE AND GENERAL EXPENSES:					
Revenue Fund:					
Salaries	\$ 133,264.64				
Expenses for administrative officers and employees	753.13				
Trustees fees	27,636.42				
Fiscal agents' fees	7,121.35				
Accounting and legal fees	9,417.52				
Consulting engineer's fees	25,500.00				
Printing, stationery and office supplies	7,111.73				
Association dues	1,000.00				
Insurance	4,060.71				
Telephone and telegraph	2,399.68				
Automobile and traveling expense	2,688.61				
Publicity and advertising	7,771.52				
Office furniture and fixtures	3,865.70				
Miscellaneous expenses	447.07				
Operations Reserve Fund:					
Insurance	2,794.20				
Capital properties acquired—renewals	5,933.13				
TOTAL	\$ 241,795.41				
Less:					
Revenue Fund:					
Amount received from Patapsco Tunnel Construction Fund for the fiscal year ended September 30, 1958	\$ 5,000.00				
Amount received from State Roads Commission for services in connection with operation of Williamsport Bridge	3,750.00				
Refund in insurance premium paid	97.86				
Refund of overpayment	20.00				
Damage reimbursement	28.28				
TOTAL	\$ 8,896.14				
REMAINDER—Net Administrative and General Expenses	\$ 232,899.27				
NET INCOME	\$9,606,515.35				

EXHIBIT R

FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954, RELATING TO BRIDGE AND TUNNEL REVENUE BONDS
BALANCE SHEET, SEPTEMBER 30, 1957

	TOTAL	MARYLAND TOLL REVENUE PROJECTS					BRIDGE CONSTRUCTION ACCOUNT	PATASCO TUNNEL CONSTRUCTION ACCOUNT	BONDED DEBT
		REVENUE FUND	OPERATIONS RESERVE FUND	BOND SERVICE ACCOUNT	SINKING FUND				
					RESERVE ACCOUNT	REDEMPTION ACCOUNT			
ASSETS									
Cash On Deposit:	\$ 5,710,000.00	\$ 150,400.00	\$ 412,008.09	\$ 125,000.00	\$ 9,762.34	\$ 1,035,718.30	\$ 3,668,030.76		
Fidelity-Baltimore National Bank County Trust Company	50,000.00						30,000.00		
Cash In Hand—Undeposited Collections	43,804.15	43,804.15							
Revolving Funds:									
For payment of costs and expenses	25,000.00								
For bridge charges	18,500.00								
For bridge charges	31,500.00						25,000.00		
CASH WITH STATE ROADS COMMISSION OF MARYLAND	197,834.44								
INVESTMENT IN UNITED STATES OBLIGATIONS—AT COST	18,136,161.70		3,610,649.07		9,883,019.09				
GUARANTY DEPTS WITH FIDELITY-BALTIMORE NATIONAL BANK, TRUSTEE	6,000.00								
Accounts Receivable:									
Toll Tickets	497.00								
Toll charges	5,394.55								
CAPITAL PROPERTIES:									
Susquehanna River Toll Bridge	4,702,861.84						4,702,861.84		
Potomac River Toll Bridge	5,628,250.00						5,628,250.00		
Poesapeake Bay Toll Bridge	43,359,002.75						43,359,002.75		
Patasco Tunnel:									
Patasco Tunnel Project	109,947,736.45						109,947,736.45		
Northern Approach Extension	723,873.77						723,873.77		
FUTURE TOLL BRIDGE AND TUNNEL REVENUE EXCUMBERED AND PORTION OF EXISTING SINKING FUND AVAILABLE FOR PAYING PRINCIPAL OF BRIDGE AND TUNNEL REVENUE BONDS	172,146,000.00	\$ 265,696.30	\$ 4,052,657.76	\$ 425,000.00	\$ 9,892,781.43	\$ 1,035,718.30	\$ 149,057,140.52	\$ 172,146,000.00	
TOTAL ASSETS	\$ 392,763,023.40	\$ 265,696.30	\$ 4,052,657.76	\$ 425,000.00	\$ 9,892,781.43	\$ 1,035,718.30	\$ 149,057,140.52	\$ 172,146,000.00	

LIABILITIES									
RESERVES CREATED UNDER ARTICLE V OF TRUST AGREEMENT:									
For operating expenses and other costs	\$ 4,206,039.29	\$	153,381.53	\$	4,052,657.76	\$	425,090.00	\$	9,892,781.43
For requirements of Maryland Toll Revenue Projects—Interest and Sinking Fund	11,353,579.73								\$ 1,035,708.30
Reserve for PARISCO TUNNEL CONSTRUCTION COSTS: For encumbrances account of contract awards.	19,009,929.03								\$ 19,009,929.03
For further costs.	19,375,595.27								19,375,595.27
RESERVES CREATED WITH CHESAPEAKE BAY FERRY SYSTEM FUNDS:									
For Chesapeake Bay Bridge costs	192,237.71								\$ 192,237.71
For possible ticket refunds	5,596.73								5,596.73
OTHER RESERVES:									
For guaranty deposits	6,000.00								
For toll tickets sold for future use	192,443.77								
For limitation on deposits	3,871.00								
BONDS PAYABLE ONLY FROM REVENUE OF BRIDGES AND TUNNELS:									
STATE SECURITY REPRESENTED BY:	172,146,000.00								172,146,000.00
Portion of Bond Proceeds, Not Investment Income and Project Revenues, Invested in:									
Susquehanna River Toll Bridge	2,546,642.56								2,546,642.56
Potomac River Toll Bridge	2,453,280.06								2,453,280.06
Chesapeake Bay Toll Bridge	45,064,240.46								45,064,240.46
Parasco Tunnel Project	110,671,616.22								110,671,616.22
Federal Grant Invested in Susquehanna River Toll Bridge	1,979,219.28								1,979,219.28
Federal Grant Invested in Potomac River Toll Bridge	2,351,970.00								2,351,970.00
Chesapeake Bay Ferry System Funds Invested in Chesapeake Bay Toll Bridge	294,762.29								294,762.29
TOTAL LIABILITIES	\$392,763,023.40	\$	265,696.30	\$	4,052,657.76	\$	425,090.00	\$	9,892,781.43
									\$ 1,035,708.30
									\$ 55,887,949.09
									\$149,057,140.52
									\$172,146,000.00

**FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS
STATEMENT SHOWING CHANGES DURING THE FISCAL YEAR ENDED
SEPTEMBER 30, 1957, IN RESERVES CREATED UNDER ARTICLE V OF TRUST
AGREEMENT DATED OCTOBER 1, 1954**

	MARYLAND TOLL REVENUE PROJECTS				
	REVENUE FUND	OPERATIONS RESERVE FUND	SINKING FUND		
			BOND SERVICE ACCOUNT	RESERVE ACCOUNT	REDEMPTION ACCOUNT
Balance, October 1, 1956	\$ 202,298.20	\$3,631,813.96	\$ 425,090.00	\$10,293,424.45	\$ 167.92
ADDITIONS:					
Total Income	9,166,233.39				
Income from Investments		77,659.02	69,970.53	336,836.50	
Proceeds from sale of property		3,279.38			
Property damage recovery		3,575.82			
Return of premium on Faithful Performance Bond		883.39			
Transfer from Patapsco Tunnel Construction Fund to provide for term bond interest payable April 1, 1957			2,146,635.00		
Transfer from Patapsco Tunnel Construction Fund to provide for term bond interest payable October 1, 1957			2,107,035.00		
Transfer from Reserve Account					737,479.52
Transfer from Maryland Toll Revenue Projects Revenue Fund		801,872.92	737,524.62		6,966,485.86
TOTAL ADDITIONS	\$9,166,233.39	\$ 887,261.53	\$5,061,165.15	\$ 336,836.50	\$7,703,965.38
TOTAL	\$9,368,531.59	\$4,519,075.49	\$5,486,255.15	\$10,630,260.95	\$7,704,133.30
DEDUCTIONS:					
Expenses, excluding General and Administrative Expenses	\$ 534,929.41	\$ 173,972.30			
General and Administrative Expenses	174,337.25	142.85			
Expenditures for Patapsco Tunnel Northern Approval Extension:					
Administrative and Legal		4,307.50			
Land and Rights-of-Way		452.13			
Construction		271,935.86			
Engineering		15,607.09			
Transfer to Interest and Sinking Fund:					
Bond Service Account	737,524.62				
Redemption Account	6,966,485.86				
Transfer to Operating Reserve Fund (Account of 1956-57, \$370,161.95; Account of 1957-58, \$431,710.97)	801,872.92				
Transfer to Redemption Account				737,479.52	
Bridge and Tunnel Revenue Term Bonds purchased					\$6,668,425.00
Accrued interest paid on Bridge and Tunnel Revenue Term Bonds purchased			\$ 61,760.15		
Interest due April 1, 1957			2,532,125.00		
Interest due October 1, 1957			2,467,280.00		
TOTAL DEDUCTIONS	\$9,215,150.06	\$ 466,417.73	\$5,061,165.15	\$ 737,479.52	\$6,668,425.00
BALANCE, SEPTEMBER 30, 1957	\$ 153,381.53	\$4,052,657.76	\$ 425,090.00	\$9,892,781.43	\$1,035,708.30

**FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED
OCTOBER 1, 1954, RELATING TO BRIDGE AND TUNNEL REVENUE BONDS**

**STATEMENT OF INCOME AND EXPENSES OF SUSQUEHANNA RIVER, POTOMAC
RIVER, AND CHESAPEAKE BAY TOLL BRIDGES FOR THE FISCAL YEAR
ENDED SEPTEMBER 30, 1957**

	TOTAL	SUSQUEHANNA RIVER TOLL BRIDGE	POTOMAC RIVER TOLL BRIDGE	CHESAPEAKE BAY TOLL BRIDGE
INCOME:				
Toll income based on toll transactions:				
Cash tolls	\$8,593,570.50	\$1,481,479.15	\$2,207,197.20	\$4,904,894.15
Ticket tolls	482,311.34	217,981.29	17,285.40	217,043.65
Charge tolls	63,335.55	386.70	10,447.80	52,501.05
Total toll income based on toll transactions	\$9,139,217.39	\$1,699,847.14	\$2,234,931.40	\$5,204,438.85
Collections in excess of calculated tolls—net	2,131.22	122.81	631.71	1,376.70
Unredeemed toll tickets issued from October 1, 1953, through September 30, 1954	19,069.09	8,826.19		10,242.90
Sale of stickers for use with commutation tickets	5,557.00	4,520.00		1,037.00
Miscellaneous revenue	258.69	32.48	129.16	97.05
TOTAL INCOME	\$9,166,233.39	\$1,713,348.62	\$2,235,692.27	\$5,217,192.50
EXPENSES, EXCLUDING ADMINISTRATIVE AND GENERAL EXPENSES:				
Operating—				
Revenue Fund:				
Salaries	\$ 389,114.46	\$ 172,185.85	\$ 83,194.91	\$ 133,733.70
Electricity for lighting	12,092.76	4,297.15	3,045.58	4,750.03
Fuel for heating	4,855.59	2,160.69	569.35	2,125.55
Printing, including toll tickets	9,423.13	7,085.77	562.80	1,774.56
Automobile expenses, including employees' meals	1,382.63	366.99	298.35	717.29
Supplies	3,638.47	2,120.73	548.11	969.63
Telephone	2,518.49	643.89	733.62	1,140.98
Uniforms	2,144.71	961.13	461.60	721.98
Armored car service	1,249.42			1,249.42
Other	1,264.44	571.48	63.89	629.07
Maintenance:				
Revenue Fund:				
Salaries	72,702.34	14,804.40	14,034.25	43,863.69
Materials and other expenses	12,092.57	5,935.90	3,198.91	10,797.76
Independent contractors	3,635.96	2,271.85	76.98	1,287.13
Insurance	3,239.60	1,324.55	720.38	1,194.67
Capital properties acquired—new	7,734.84	2,265.81	3,831.89	1,637.14
Operations Reserve Fund:				
Independent contractors	22,541.35			22,541.35
Insurance	28,691.38	7,865.65	8,570.80	12,254.93
Capital properties acquired—renewals	122,739.57	89,479.44	30,092.95	3,167.18
TOTAL EXPENSES, EXCLUDING ADMINISTRATIVE AND GENERAL EXPENSES:				
Revenue Fund				
	\$ 534,929.41	\$ 216,996.19	\$ 111,340.62	\$ 206,592.60
Operations Reserve Fund	173,972.30	97,345.09	38,663.75	37,963.46
TOTAL	\$ 708,901.71	\$ 314,341.28	\$ 150,004.37	\$ 244,556.06
NET OPERATING INCOME	\$8,457,331.68	\$1,399,007.34	\$2,085,687.90	\$4,972,636.44
ADMINISTRATIVE AND GENERAL EXPENSES:				
Revenue Fund:				
Salaries	\$ 106,905.08			
Expenses for administrative offices and employees	489.80			
Trustee's fees	28,022.50			
Fiscal agent's fees	11,541.59			
Accounting and legal fees	8,955.59			
Consulting engineer's fees	12,000.00			
Office rent	4,400.00			
Printing, stationery, and office supplies	4,447.38			
Association dues	1,000.00			
Insurance	2,831.32			
Telephone and telegraph	1,509.87			
Automobile and traveling expense	4,188.79			
Publicity and advertising	8,337.68			
Office furniture and fixtures	3,629.49			
Miscellaneous expenses	942.57			
Operations Reserve Fund—				
Capital properties acquired—renewals	142.85			
TOTAL	\$ 199,344.51			
Less:				
Revenue Fund—				
Amount received from State Roads Commission for services in connection with operation of Williamsport Toll Bridge	\$ 5,000.00			
Amount received from Baltimore County Revenue Authority for services in connection with operation of Bear Creek Toll Bridge	3,000.00			
Amount received from Patapsco Tunnel Construction Fund	15,000.00			
Sale of waste paper	36.40			
Refund of compensation insurance premium	1,828.01			
TOTAL	\$ 24,864.41			
REMAINDER—Net Administrative and General Expenses	\$ 174,480.10			
NET INCOME	\$8,282,851.58			

**FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS**

**STATEMENT SHOWING DEPOSITS AND WITHDRAWALS, PATAPSCO TUNNEL
CONSTRUCTION FUND, BY PERIODS, FROM DECEMBER 7, 1954,
THROUGH SEPTEMBER 30, 1958**

	DECEMBER 7, 1954, TO SEPTEMBER 30, 1956	FISCAL YEAR ENDED SEPT- EMBER 30, 1957	FISCAL YEAR ENDED SEPT- EMBER 30, 1958	DECEMBER 7, 1954, TO SEPTEMBER 30, 1958
DEPOSITS:				
Proceeds from sale of Bridge and Tunnel Revenue Bonds dated October 1, 1954, and sold December 7, 1954, including accrued interest of \$947,866.33	\$178,841,866.33			\$178,841,866.33
Less:				
Portion applied toward redemption of Bridge Revenue Bonds (Series 1948)	\$34,037,000.00			
Accrued interest from October 1, 1954, through December 7, 1954, deposited with the Trustee to the credit of Bond Service Account	947,866.33	34,984,866.33		34,984,866.33
Remainder	\$143,857,000.00			\$143,857,000.00
Proceeds from sale or redemption of United States Obligations (Investment Securities)	90,333,192.58	110,537,623.13	97,282,262.80	298,153,078.51
Interest on United States Obligations:				
Earned	2,893,329.13	1,593,259.49	719,360.89	5,205,949.51
Recovery of accrued interest purchased	469,679.91	87,199.44	134,935.36	691,814.71
Recovery of payments made in connection with acquisition of rights-of-way, etc.	263,606.48	97,030.35	37,619.27	398,256.10
Sale of plans and specifications	26,327.00	529.34	900.00	27,756.34
Sale of land not needed for rights-of-way		6,150.00		6,150.00
Sale of material, etc., not needed		8,914.77	4,610.00	13,524.77
Total Deposits	\$237,843,135.10	\$112,330,706.52	\$ 98,179,688.32	\$448,353,529.94
WITHDRAWALS:				
Expenditures for Patapsco Tunnel Project Costs:				
Preliminary expenses	\$ 455,121.80			\$ 455,121.80
Land and rights-of-way	7,914,968.10	\$ 1,491,226.73	\$ 1,005,696.54	10,411,891.37
Construction	34,923,615.52	45,142,327.80	17,300,467.13	97,366,410.45
Engineering	5,151,873.19	2,295,567.38	1,287,506.93	8,734,947.50
Administrative and legal	161,233.31	72,714.99	425,335.95	659,284.25
Maintenance and office equipment and supplies	12,709.78	84,909.00	388,403.33	486,022.11
Transfer to Bond Service Account for interest on outstanding term bonds	7,821,870.00	4,253,670.00	4,025,925.00	16,101,465.00
Financing expenses	165,928.85			165,928.85
Total	\$56,607,320.55	\$53,340,415.90	\$24,433,334.88	\$134,381,071.33
Purchase of United States Obligations (Investment Securities)	\$178,712,792.07	\$56,837,701.39	\$76,066,793.32	\$311,617,286.78
Accrued interest on United States Obligations purchased	469,679.91	87,199.44	134,935.36	691,814.71
Expenditures made in connection with acquisition of rights-of-way, etc., subsequently recovered	263,606.48	97,030.35	37,619.27	398,256.10
Purchase of land subsequently sold		6,150.00		6,150.00
Purchase of material subsequently sold		8,914.77	4,610.00	13,524.77
Total Withdrawals	\$236,053,399.01	\$110,377,411.85	\$100,677,292.83	\$447,108,103.69
Excess of Deposits over Withdrawals	\$ 1,789,736.09	\$ 1,953,294.67	\$ 2,497,694.51	\$ 1,245,426.25
Cash Balance at Beginning of Period		1,789,736.09	3,743,030.76	
Cash Balance at End of Period	\$ 1,789,736.09	\$ 3,743,030.76	\$ 1,245,426.25	\$ 1,245,426.25
Investment in United States Obligations—at cost	88,300,000.00	34,642,493.54	13,491,683.61	13,491,683.61
Total Cash and Investments at End of Period	\$ 90,089,736.09	\$ 38,385,524.30	\$ 14,737,109.86	\$ 14,737,109.86

Italics indicate red figures.

FUNDS ADMINISTERED UNDER TRUST AGREEMENT DATED OCTOBER 1, 1954,
RELATING TO BRIDGE AND TUNNEL REVENUE BONDS
STATEMENT OF TRAFFIC VOLUME AND TOLL INCOME, BY TOLL FACILITIES AND
CLASSIFICATIONS, FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 1958 AND 1957

	TOLL RATE	FISCAL YEAR ENDED SEPTEMBER 30,			
		1958		1957	
		TRAFFIC VOLUME	TOLL INCOME	TRAFFIC VOLUME	TOLL INCOME
SUSQUEHANNA RIVER TOLL BRIDGE:					
Passenger cars, etc.:					
Rate through October 31, 1957	\$.20	368,156	\$ 73,631.20	5,455,210	\$1,091,042.00
Rate effective November 1, 1957	.25	5,107,808	1,276,952.00		
Buses on Schedule Run (local) (commutation rate)	.15	722	108.30	2,836	425.40
Passenger cars, etc.—Maryland tags (commutation rate)	.01	1,262,649	12,626.49	1,277,780	12,777.80
Passenger cars, etc.—Out of state tags (commutation rate)	.03	159,002	4,770.06	222,818	6,684.54
2-Axle vehicles:					
Rate through October 31, 1957	.25	16,285	4,071.25	204,013	51,003.25
Rate effective November 1, 1957	.30	172,531	51,759.30		
3-Axle vehicles	.40	230,892	92,356.80	247,171	98,868.40
4-Axle vehicles:					
Rate through October 31, 1957	.40	54,051	21,620.40	600,860	240,344.00
Rate effective November 1, 1957	.45	537,564	241,903.80		
2-Axle vehicles (commutation rate)	.20	76,236	15,247.20	76,080	15,216.00
3-Axle vehicles (commutation rate)	.30	121,821	36,546.30	150,736	45,220.80
4-Axle vehicles (commutation rate)	.30	447,255	134,176.50	419,046	125,713.80
5-Axle and unusual vehicles	.55 Min.	4,334	11,082.35	4,275	12,551.15
Official duty vehicles	Free	24,264		23,854	
TOTAL		8,583,570	\$1,976,851.95	8,684,679	\$1,699,847.14
POTOMAC RIVER TOLL BRIDGE:					
Passenger cars, etc.:					
Rate through October 31, 1957	\$1.00	1,794,578	\$1,794,578.00	1,882,566	\$1,882,566.00
Rate effective November 1, 1957	.50	10,300	5,150.00	8,802	4,401.00
Passenger cars and 1-axle trailers	1.40	26,365	36,911.00	25,894	36,251.60
Motorcycles	.40	1,518	607.20	1,798	719.20
2-Axle vehicles	1.10	38,138	42,281.80	39,946	43,940.60
3-Axle vehicles	1.50	32,370	48,555.00	36,915	55,372.50
4-Axle vehicles	2.50	90,909	227,272.50	79,124	197,810.00
5-Axle vehicles	3.00	365	1,095.00	266	798.00
Buses	1.50	5,702	8,553.00	6,945	9,067.50
Unusual vehicles	5.00	1,264	6,320.00	801	4,005.00
Official duty vehicles	Free	3,127		2,814	
TOTAL		2,004,936	\$2,171,323.50	2,084,971	\$2,234,931.40
CHESAPEAKE BAY TOLL BRIDGE:					
Passenger cars, etc. (Rate through October 31, 1957)	\$1.40	158,324	\$ 221,653.60	2,356,253	\$3,298,754.20
Passenger cars, etc. with extra passengers (Rate effective November 1, 1957)	1.50	4,484,523	2,226,784.50		
Passenger cars, etc. with driver only (Rate effective November 1, 1957)	1.25	416,866	521,082.50		
Passenger cars, etc. commutation, with driver only	.35	97,367	34,078.45	163,080	57,078.00
Passenger cars, etc. commutation, with extra passengers (Rate effective November 1, 1957)	.45	52,652	23,693.40		
Passenger car and one-axle trailer:					
Rate through October 31, 1957	2.10	1,735	3,643.50	23,338	49,009.80
Rate effective November 1, 1957	1.90	19,179	36,440.10		
Passenger car and two-axle trailer:					
Rate through October 31, 1957	2.80	639	1,789.20	4,671	13,078.80
Rate effective November 1, 1957	2.50	4,359	10,897.50		
Buses on scheduled run	1.50	7,517	11,275.50	6,950	10,425.00
2-Axle vehicles	2.25	84,377	189,848.25	85,400	192,150.00
3-Axle vehicles	3.50	61,672	215,852.00	68,414	239,449.00
4-Axle vehicles	4.50	94,005	423,022.50	82,863	372,883.50
5-Axle vehicles	5.00	902	4,510.00	1,789	8,945.00
Motorcycles	1.00	1,118	1,118.00	1,472	1,472.00
Unusual vehicles	5.00	1,065	5,325.00	684	3,420.00
Official duty vehicles	Free	42,104		41,342	
Total Motor Vehicles		2,528,404	\$3,931,014.00	2,836,256	\$4,246,665.30
Passengers in vehicles	.25	†	117,363.90	3,794,227	948,556.75
Passengers in vehicles (commutation rate)	.10	8,270	827.00	92,168	9,216.80
Total Passengers		†	\$ 118,190.90	3,886,395	\$957,773.55
Total			\$4,049,204.90		\$5,204,438.85
PATAPSCO TUNNEL*					
Passenger cars, etc.:					
Rate through October 31, 1957	\$.40	6,121,855	\$ 2,448,742.00		
Rate effective November 1, 1957	.25	657,693	164,423.25		
2-Axle vehicles	.60	191,692	115,015.20		
3-Axle vehicles	.70	217,039	151,927.30		
4-Axle vehicles	.85	594,425	505,261.25		
5-Axle or more vehicles	.95	1,858	1,765.10		
Buses	.70	25,654	17,957.80		
Official duty vehicles	Free	145,384			
Total		7,955,600	\$3,405,091.90		

* Open to traffic 12:01 A. M., November 30, 1957.
† From November 1, 1957 number of passengers is indeterminate.

A HISTORY
OF
ROAD BUILDING IN MARYLAND

STATE ROADS COMMISSION OF MARYLAND

1958

FOREWORD

The story of road building in Maryland is fascinating. It typifies the march of civilization, its strivings, its mistakes, and its amazing accomplishments. It is really the story of road building in America.

It takes us from Colonial footpaths—Indian trails and buffalo traces—to our modern dual-lane expressways with their grassy, landscaped median strips and their spectacular interchanges—to bridges over our great rivers and Chesapeake Bay and to the tunnel under Baltimore's harbor.

Maryland's mountains, marshes, rolling valleys and broad fields, together with her rivers and vast expanses of water, furnish the road builder challenges which have produced many significant contributions to highway development in the United States.

For fifty years Maryland's highways have been the concern of the State Roads Commission. On its Golden Anniversary the Commission presents "A History of Road Building in Maryland."

Charles T. LeViness did the necessary research and recorded the facts. He has written an illuminating tale. He has been assisted by other members of the Commission's staff and by J. William Hunt of Cumberland, who has edited portions of the text. The Commission is indebted to them and to all others who have helped in the preparation of this interesting and informative story.

We particularly want to express our appreciation to the Bureau of Public Roads, which made available source material and illustrations; and to William T. Claude, the Commission's photographer, for many of the current photographs.

John J. Mullen
Hedgar Sennett
John J. Mullen

A HISTORY OF ROAD BUILDING IN MARYLAND

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FIFTIETH BIRTHDAY. The golden anniversary meeting of the State Roads Commission in 1958 is preceded by the cutting of a birthday cake. On the table are the "golden milestones" won by the Commission in 1954 and 1956 for excellence in highway programming. In the picture are, from left, Commissioner Edgar T. Bennett, Chairman Robert O. Bonnell, Governor Theodore R. McKeldin and Commissioner John J. McMullen.

A HISTORY OF ROAD BUILDING IN MARYLAND

Part I

HIGHWAYS AND BYWAYS OF THE PAST

Chapter I

THE MARYLAND ROAD SYSTEM IN WASHINGTON'S DAY

When George Washington delivered his Farewell Address in 1796, Maryland was 162 years old — just half of her present age as this is written.

Founded in 1634 as an English province, Maryland had become in that time a comparatively rich and powerful member of a new union of independent states. As an example of her wealth she was able in 1796 to lend the struggling federal government \$100,000 to start a building program in the new city of Washington—but prudently required three personal endorsements to guarantee repayment.¹

In the concert of the thirteen states strung along the Atlantic seaboard Maryland's voice was relatively powerful. Her record in the recent War for Independence had been excellent. Her representatives in the several congresses had been men of strength and vision. The first President of the re-formed Continental Congress under the Articles of Confederation had been a Marylander, John Hanson—eight years before Washington became President under the new constitution.

The province had pushed through almost single-handedly the Maryland Plan for the new government, a keystone of the constitution which assured that the rich territory west of the mountains and beyond the Ohio should be public lands and even states some day.

Part of Maryland's strength in those days undoubtedly was due to her geographical location. Although one of the smallest of the original states,

¹ Scharf's History of Maryland, Baltimore (1879), Vol. II, page 572.

she had the seacoast, the mountains, the great Bay and numerous ports of entry for foreign ships. Also the new federal capital was being built on the banks of the Potomac on land Maryland had ceded for the purpose.

Maryland was then, as she is today, the natural corridor for land transportation up and down the Atlantic Coast. Situated at half-way point in the new union, the state was criss-crossed by post routes carrying the mail from north to south; and interstate coach and wagon trails served both passengers and freight.

By 1796 most of the great through-traffic routes of today were in service—and on substantially the same locations.

In addition, there were several important interstate arteries in use which do not even exist today—trails hacked through forest and mountain to serve necessity and which were allowed to revert to nature when the need ended.

These early roads of Maryland were not planned, in the sense that our engineers lay out routes today. Like Topsy, they just grew.

In the early days of the province Maryland's great transportation system was made up of the Chesapeake Bay and its countless tributaries which have been compared to the heart, arteries and veins of the human body.²

Naturally enough, the first roads stemmed from the little settlement at St. Mary's; they connected heads of rivers and ran to public landings. The first long road of the province is said to have been from St. Mary's City south to Point Lookout, a distance of twelve miles and now a part of State Route 5.

THE FIRST ROAD LAW

Maryland's first road law—the original ancestor of hundreds which have followed throughout the years—was passed by the colonial Assembly in 1666.³ It required the County Commissioners of each county to lay out a road system that would make the heads of rivers and creeks “passable for horse and foot.” The act further provided for the appointment of overseers to build and maintain the roads, a tax against the inhabitants which could be paid in tobacco or in labor, and fines for non-performance.

² Geological Survey Reports, Vol. III, page 110.

Note:—The “Geological Survey” references are to the bound volumes of the reports of the Maryland Geological Survey Commission printed in Baltimore between 1897 and 1910 and found in the Enoch Pratt Free Library and other places. Their highway reports contain a wealth of information on the condition of Maryland roads at the time as well as historical data from the past.

³ Acts of 1666, Chapter 134; *Ibid*, page 112.

From the language of this law several conclusions may be drawn. Even in a community where major travel was by water-ways, roads were necessary to join the heads of streams. No wagons or coaches were considered. Travel was strictly by horse and foot.

The public authorities were to build and maintain the roads and the agency selected was the county government—a policy that continued almost without interruption until establishment of the State Roads Commission in 1908.

Thereafter a number of trails were hewn out of Southern Maryland forests for short distances and at least one inter-county road for pack-horses was built from Port Tobacco, then county seat of Charles. It ran through Allen's Fresh and Chaptico to Leonardtown, in St. Mary's County. Here it connected with the existing road to the provincial capital at St. Mary's. Nearly fifty miles in length, it was for many years one of Maryland's principal thoroughfares.

Meanwhile the little colony was expanding. Both northern Maryland and the Eastern Shore were being populated by settlers attracted by the rich and virgin farm land and the prospects of trade.

THE HERMAN HIGHWAY

In 1662 Augustine Herman, who had made the best early map of the province, was granted a large tract of land in what is now Cecil County. He called it Bohemia Manor after his homeland.

At this point the Delmarva Peninsula is only twenty miles wide and Herman promptly built a road across it to connect the Chesapeake Bay region with the Delaware River.⁴ When Cecil County was established in 1674 the county government built other roads from the Susquehanna to the Sassafras rivers, including a primitive version of present-day U. S. 213.

In 1956 Herman was given belated recognition for his early interest in road-building. The State Roads Commission having re-built U. S. 213 to modern standards, officially proclaimed it the "Augustine Herman Highway."

By the end of the Seventeenth Century the province had expanded northward and eastward so rapidly that it had completely outgrown its early capital at St. Mary's City. The seat of government was transferred to the thriving town of Annapolis, which had become the cultural as well as the population center of Maryland.

⁴ Johnston's History of Cecil County (1881), page 74.

Baltimore was non-existent but there were a number of promising settlements around the head of the Patapsco. Baltimore County was busy building roads but having trouble keeping them up. The Eastern Shore had been settled all along the Chesapeake and roads of a sort connected the towns and ports, of which the busiest was Oxford in Talbot County, then called "William Stadt."

MARYLAND'S FIRST POST ROAD

It was at this time in the life of the province, in the closing years of the Seventeenth Century, that the first post road was established in Maryland.

If England could have prevented post roads in America there might have been no revolution and no union of separate states. No one factor gave the colonies a greater feeling of unity than the interchange of mail, newspapers and magazines. Before the post their eyes were turned to England and the mail boats brought them news of the motherland. There was little communication among the colonies. After the post they turned to each other.

To Annapolis came pamphlets from Boston, New York, Philadelphia and Charleston. From Annapolis went a variety of printed matter, including *The Maryland Gazette*, a Seventeenth Century newspaper still being printed today and the oldest weekly in the United States.

Maryland's first established mail route was opened in 1695. It furnished service by a postman on horseback eight times a year from the Potomac to Philadelphia. The service started at or near Cobb Island in Charles County, where it picked up mail from Williamsburg and the South. From there it went through Allens Fresh to Benedict, where it crossed the Patuxent by ferry and generally followed the course of present State Route 2 to Annapolis. Thence it crossed the Bay by sail to Oxford, up the Shore by the general course of U. S. 213 and through Herman's Plantation to New Castle. The last leg of the trip was by water up the Delaware to Philadelphia, where it connected with other posts from the north.

Maryland cleared or opened no new roads for the first post. The postman, John Perry, received a salary of fifty dollars a year and rode the pack-horse trails of the day.⁵

TRAILS WIDENED FOR CARTS

At about the same time the first post was organized, carts for hauling freight began to appear on Maryland foot-paths. There was no law to

⁵ Geological Survey Reports, Vol. III, page 119.

bar them from the roads but the traffic problem suddenly became acute. There was talk of legislating them out of existence but also there was support for another measure to meet the crisis: widen the roads.

The first record of widening roads to accommodate wheeled vehicles is found in Baltimore County and the first road ordered to be so improved was the predecessor of our present U. S. 40 east of Baltimore.

By 1695 this road had been in existence for some years as far east as Havre de Grace. In that year the county authorities ordered the road widened to thirty feet to make it passable for carts. It also ordered the substitution of bridges for ferries. However, this order was not fully carried out as ferries continued to ply the rivers and it was many years before the road attained a thirty-foot width.

The example of Baltimore County had an important impact on the colonial Assembly, for in 1704 it passed a sweeping law requiring all main roads in the province to be widened to twenty feet.⁶

Viewed in retrospect, this road-building program was a crude and simple job. First, the roadway was cleared and grubbed to a width of twenty feet. Then ditches were dug along the edges for drainage and the earth so removed was thrown on the road toward the center, forming a crown. There was no rolling or leveling as traffic was relied on to compact the surface.

The resulting product was a fairly good driving surface in dry weather but when it rained the road was muddy and sometimes impassable. Every spring the road had to be almost entirely rebuilt.

Simple as the task may seem to modern generations, the road program of 1704 presented a serious problem to the people; for no money at all had been appropriated for the project.

The county overseers were required to conscript what labor was needed. Plantation owners were forced to send to the local overseer "all their taxable male servants." Freemen also were required to work the roads. Heavy penalties were assessed against all delinquents, including the overseer himself if he should "neglect to clear the roads under his charge."

Aside from labor, which was the critical problem, the other details of road construction were easier. Property owners gladly donated the land needed for rights of way, road machinery was pick-and-shovel and road material was merely the earth itself.

The records do not show how soon or in what mileage the principal roads of the province were widened to twenty feet. Slowly in some

⁶ Acts of 1704 (Bacon's Laws) Chapter 21; Geological Survey Reports, Vol. III, page 120.

quarters, more rapidly in others, a road system developed in Maryland capable of handling the new carts—and later the wagons and the stages.

AMERICAN ATHENS

The first half of the Eighteenth Century was the golden age of Annapolis and many roads were built to connect it with all corners of the province. By 1699 the seat of government had been transferred there, a port of entry established, an academy founded named King William School (now St. John's College) and Annapolis was well on her way to becoming what she was universally called, "The Athens of America."

THE ROLLING ROADS

Since the economy of the new capital was securely anchored to the tobacco trade, one of the first acts was the building of four "rolling roads"⁷ into the city. The records do not disclose the location of these special paths but their utility was obvious. They were built to roll hogsheads of tobacco from nearby plantations down to the port of Annapolis. Their motive power, in addition to gravity, was at first slaves and later oxen.



One of the early "rolling roads" built to carry hogsheads of tobacco from the plantations to the ship waiting to transport it to England.

⁷ Geological Survey Reports, Vol. III, page 124.

The building of these rolling roads spread to every tobacco-growing section of the colony but their use did not long outlive the coming of sturdy wagons. At least one such trail survives today by name and probably by location. It is Baltimore County's Rolling Road. It begins in Rockdale at Liberty Road, runs through Catonsville and ends at Relay, across the Patapsco from the then thriving port of Elkridge. It is said to have been built in 1714 by William Summers, of Garrison.⁸

From Annapolis roads soon fanned out in all directions. One of the first was a new overland post route to Philadelphia on the north and Williamsburg on the south. Jonathan Dickinson of Philadelphia wrote in 1717: "We have a settled post from Maryland and Virginia whereby advices from Boston to Williamsburg are complete in four weeks, from March to December, and in double that time in the other months of the year."⁹

Poor Richard's Almanac for 1733 gives the northern route of the post road as follows: From Annapolis to Patapsco Ferry (Baltimore), Gunpowder Ferry, Susquehanna Ferry, North East, Elk River, New Castle, Chester and Philadelphia, a total distance of 145 miles.

This road ran up the south shore of the Severn River along what later was called the General's Highway (so named because Washington used it when going to Annapolis at the close of the Revolutionary War to surrender his commission as Commander-in-Chief). It is now State Route 178.

It crossed the fledgling settlement of Baltimore by Great Eastern Road¹⁰ which then bisected what is now Charles and Saratoga Streets. It followed the route of Old Philadelphia Road (State Route 7) on the general course of Pulaski Highway, present-day U. S. 40 northeast from Baltimore.

ANNAPOLIS BECOMES CHIEF CITY

From Annapolis southward the early maps show two main post routes. One led directly from Annapolis to Oxon Hill on the Potomac, where ferries carried the mail to Alexandria and the south. The other branched off from the first about one mile west of the Patuxent River, ran through Upper Marlboro and ended at Piscataway, which then was a busy port on the Potomac.¹¹

Since Mount Vernon is directly across the river, this road was a favorite route for Washington on his many trips through Maryland. Both of

⁸ Baltimore *Sun* Library: "Rolling Roads."

⁹ Watson, *Annals of Philadelphia*, Vol. II, page 392.

¹⁰ Owens, *Baltimore on the Chesapeake* (1941), page 28.

¹¹ Griffith's Map of Maryland, 1794, Enoch Pratt Free Library, Baltimore.

these roads have long since disappeared although sections no doubt still exist as parts of current highways.

The road from Annapolis to Bladensburg was built in mid-Eighteenth Century. From Bladensburg the road branched off to Rockville and Frederick. A second road to Baltimore was built before the end of the century. It crossed the Severn at Annapolis and followed the north shore of the river, along the course of our present Ritchie Highway (State Route 2).

Thus Annapolis, for a time the chief city of the province, had a system of roads well befitting its station. It had a splendid race track, was the political hub of Maryland and established the first social club in America, the South River Club, still in active existence.

THE RISE OF BALTIMORE

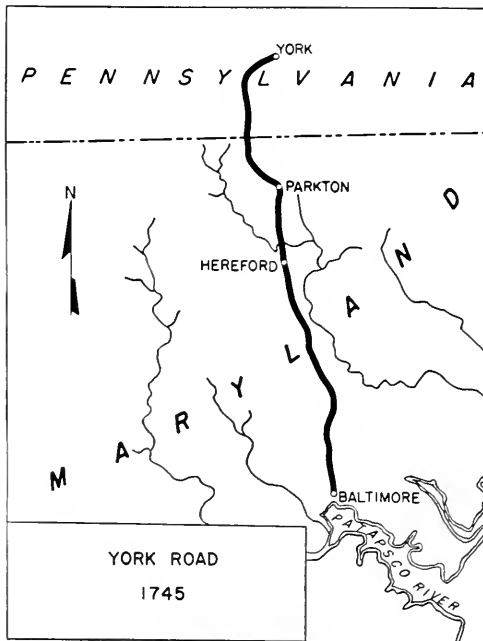
But Annapolis had a relatively short-lived pre-eminence both in population and in commerce. Baltimore, chartered 21 years after the American Athens, eclipsed it by the end of the Eighteenth Century.

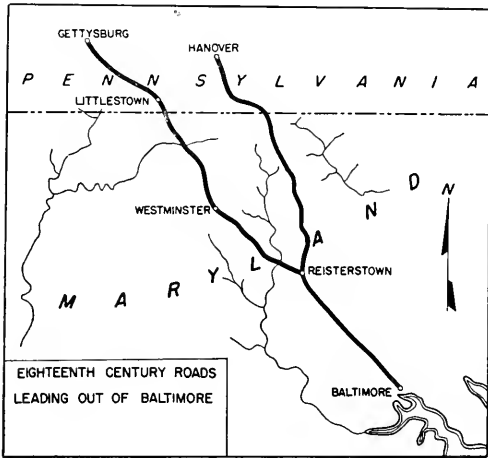
The Patapsco basin had the makings of a great port and the people of Baltimore soon transformed its shallow harbor and marshy banks into a maritime center. Grain was exported to Europe and the manufactured products of England and the continent were brought back in return.

Baltimore quickly developed an affinity with southern Pennsylvania which had been settled by a sturdy German stock. The first roads of consequence were those planned to connect these sections.

The farmers of York County found that they were only about 50 miles from the Patapsco port while they were some 90 miles from their Pennsylvania port of Philadelphia.

A direct wagon road from York to Baltimore was a natural and inevitable result of economics and geography. It was built by both

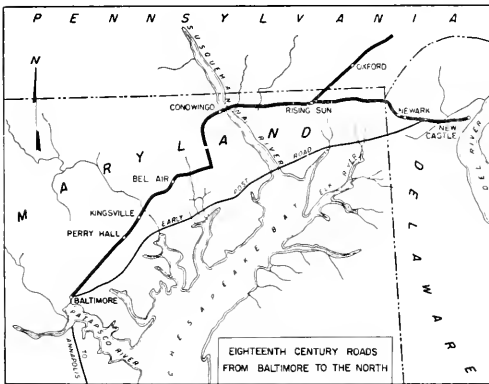




communities in the early 1740's. It was an instant success and in a single month after its opening "no less than sixty wagons loaded with flaxseed came down to Baltimore from the back country."¹²

It followed, with remarkably little change through the centuries, the present course of U. S. 111 which is now supplemented by the almost-completed Baltimore-Harrisburg Expressway.

West of York lies Adams County, even farther from Philadelphia, and this area was penetrated in the 1740's by two main routes from Baltimore. The first ran through Reisterstown and Westminster to Littlestown and Gettysburg (the present route of U. S. 140). The second branched off from the first at Reisterstown and went almost due north to the substantial Dutch settlement of Hanover (State Route 30).



In the latter part of the Eighteenth Century a second road from

Baltimore to the northeast was found necessary to tap the rich fields of Pennsylvania's Lancaster and Chester counties and to bring the farm products of Baltimore and Harford counties directly to the markets and the port.

This road started at or near dockside, ran out Baltimore's present Bel Air road through the settlements of Perry Hall, Kingsville and Bel Air, crossed the Susquehanna at or near Conowingo and ended at Oxford, in Pennsylvania. Here connections were made with Philadelphia (the present route of U. S. 1). A branch from this road was built due east from the present site of Rising Sun and led to Newark and Newcastle, thus connecting Baltimore by another direct road with the Delaware River ports. This branch may be identified on 1958 maps as State Route 273.

¹² Morse, American Geography, page 466; Geological Survey Reports, Vol. III, page 132.

THE EASTERN SHORE HAS A FLOURISHING ROADS SYSTEM

Meanwhile the Eastern Shore had been settled and a whole network of local dirt roads connected the various towns.

The first post road of 1695 which ran from Newcastle south to Oxford was widened in the Eighteenth Century and extended southward across a Choptank River ferry to Cambridge, Vienna, Salisbury and as far as St. Martin's (near present-day Berlin), where it stopped at a junction with an inter-colony road which ran the whole length of the Delmarva Peninsula.

This north-south highway,¹³ roughly the U. S. 13 and U. S. 113 of today, started at Newcastle, ran through Dover, Milford and Georgetown in Delaware, St. Martin's, Snow Hill and Pocomoke in Maryland, and then proceeded down the Eastern Shore of Virginia to Cape Charles, a 200-mile short-cut or bypass of Maryland's western shore. This gave the lower Eastern Shore a direct route to the North.

The Eastern Shore's economy in those days was based entirely on farming, hunting and fishing. The Bay was a formidable obstacle and the natural markets of the people soon became Newcastle, Wilmington and Philadelphia over the wagon routes above outlined. This early diversion of Eastern Shore commerce from Baltimore always has been a matter of serious concern to her tradespeople and to all Baltimoreans generally. The barrier still exists to some extent, although the 1952 Chesapeake Bay Bridge has done much to lower it.

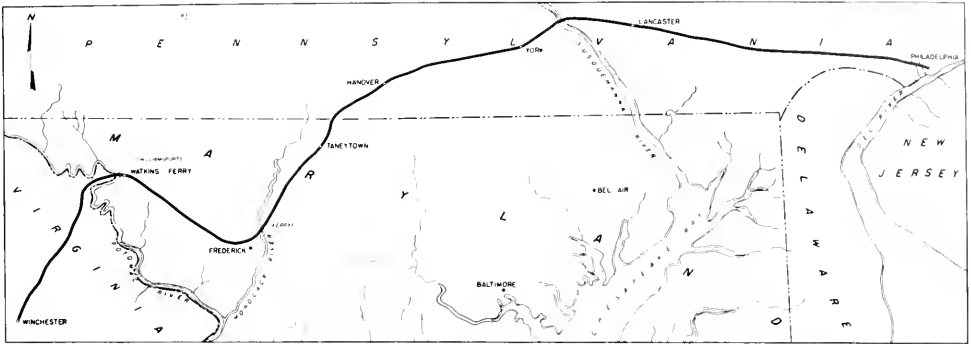
A LOST ROAD—THE MONOCACY

Since the early settlements of Maryland were along the Bay and its tributaries, it is natural that the mountainous western part of the province was the last to be colonized. In fact, the first road to be cut through the wilderness, or at least developed from an early Indian trail, was not built by Marylanders at all but by Pennsylvanians.

Known as the "Monocacy Road," this pack-horse trail connected Philadelphia, Lancaster and Hanover with the Winchester section of Virginia.

In use at least as early as 1730, it wound through some fifty miles of Maryland from an entrance near Taneytown in Carroll County to an exit at the Potomac near Williamsport in what is now Washington County, although those towns did not then exist as such. The road at first forded the Monocacy River but by 1739 it had been widened to a wagon road, at least in its northern section, and a ferry was in service over this winding stream.

¹³ Griffith's Map of Maryland, 1794.



The heavy black line shows the old Monocacy Road by which missionaries and early settlers from Pennsylvania migrated into Western Maryland and the Winchester section of Virginia. The Maryland portion of it was not in use after 1800 and it has been called a "lost road."

By this ancient thoroughfare, long since abandoned, many Pennsylvania Dutch migrated into Maryland, giving that section of our State a flavor of German industry, thrift, culture and architecture which still survives. The trail appears on Dennis Griffith's 1780 map as the "Great Wagon Road to Philadelphia"; it is omitted from his 1794 map.

This is another example of a road which sprang up through the exigencies of travel, served a useful purpose for many years and then simply disappeared when new, shorter and better roads were built to serve that purpose.

THE FOUNDING OF FREDERICK

Some of these better roads issued from a new city called Frederick,¹⁴ settled in 1745 and named in honor of the son of the province's Proprietor.

Most of its early settlers were of German birth or descent and many of them traveled the Monocacy trail to get there. Frederick was a thriving little city from the start and during part of the last century it was second only to Baltimore in wealth and population.

No navigable stream flowed through the new town so it was entirely dependent on roads; and these it proceeded at once to build. Within a few years serviceable wagon trails led from the new settlement to Baltimore, Annapolis and Georgetown.

The first of these trails ran through New Market, Ridgeville, Poplar Springs, Cooksville and Ellicott City. It is readily recognizable as the route of the old Frederick Pike which, with some improvement, served Baltimore as the great road to the west for two hundred years. A sec-

¹⁴ Scharf's History of Maryland, Vol. I, page 423.

tion of U. S. 40, it was supplanted by a new dual highway completed in 1954.

The road to Annapolis followed the Baltimore road to near New Market and then branched off in a more or less straight line.¹⁵ This road does not exist today although portions of it may have been absorbed into such modern roads as State Routes 75, 80 and 108. The Georgetown Road was the progenitor of our current U. S. 240 (The Washington National Pike).

Somewhat later in the Eighteenth Century an inter-colony road was opened through Frederick which connected central Virginia with Pennsylvania. This road served the same purpose and was partially on the same location as present-day U. S. 15.

JOHN HAGER'S TOWN

In 1744 ferry service was established across the Potomac at the mouth of Conococheague River, near the present site of Williamsport, and a road or trail was soon built across this narrow part of Maryland into Pennsylvania. It followed generally the course of today's U. S. 11. On this road a town was laid out in 1762 by a German named Captain John Hager. Roads quickly connected Frederick with Hager's town and with the above-mentioned Potomac ferry, operated by Evan Watkins.¹⁶

COLONEL CRESAP BUILDS A ROAD

At the time of the French and Indian War, this ferry was the western outpost of the province. No roads led over the Maryland mountains.

Nevertheless, far across these forbidding Appalachians, settlers were beginning to trickle in and take up land near what is now Cumberland.

One of the first of these was the colorful early Marylander, Colonel Thomas Cresap, who about 1742 built a home-fort on the Potomac on the site of an Indian village now known as Oldtown.¹⁷ An Indian trail led northerly to Wills Creek, now Cumberland, and southerly along the north bank of the River for several miles.

Colonel Cresap performed the first road construction in Allegany County in 1750 by widening this 25-mile trail for wagons. It is now State Route 51.

West of Cumberland, through a vast wilderness and over even higher mountain peaks, lay the Ohio River and the rich valley beyond it. "The Ohio Company" was formed to explore this country.

¹⁵ Geological Survey Reports, Vol. III, page 156 (Map showing travel routes in Maryland before 1776).

¹⁶ Geological Survey Reports, Vol. III, page 128, footnote 4.

¹⁷ Thomas and Williams' History of Allegany County (1923), page 198.

Colonel Cresap and Christopher Gist, aided by a Delaware Indian named Nemacolin, blazed a trail through these mountains from Cumberland to what is now Pittsburgh in 1751. This path followed an old Indian trail, which in turn followed a well-established buffalo trace.

FIRST LOCATION ENGINEER?

Thus it might be said that the first location engineer for what is now U. S. 40 west of Cumberland was the buffalo.

As Hulbert says in *The Old National Road*: "The course of the buffalo through Maryland and Pennsylvania to the Ohio River is the most historic route in America and one of the most famous in the world."¹⁸

WASHINGTON FOLLOWS THE BUFFALO

George Washington, just turned 21, followed this trail in 1753 when the Virginia colonial government sent him to confer with the French at Fort Duquesne. He was not successful in trying to persuade the French to withdraw peaceably from their American holdings so he was ordered to take their positions by force.

He returned the following year to Cumberland with a detachment of troops, followed by wagons of ammunition and stores. Because this road was not wide enough for his gear, he sent sixty men ahead to widen the trail to six feet.

Since the buffalo followed the high ground where the snow was blown clear in winter, this six-foot road ran out of Cumberland along present Green Street in almost a straight line to nearly the top of Wills Mountain, a very steep grade. Thence it descended to level ground at Sandy Gap and proceeded on its tortuous course across Savage and Negro Mountains to the Great Meadows of Pennsylvania.¹⁹

Here Washington's campaign ended in defeat at Fort Necessity, about fifteen miles north of the Pennsylvania Line. He made a miraculous escape and thus was spared for later service.

The first actual construction of the great road west of Cumberland, therefore, while only six feet wide, may be credited to the man who was to become the Father of his Country.

BRADDOCK'S ROUTE THROUGH MARYLAND

The road was doubled in width in 1755 and thereafter became Braddock's Road, in memory of the English soldier who labored long on road construction, only to meet defeat and death before he reached his goal.

¹⁸ Archer Butler Hulbert's *The Old National Road*, Columbus, Ohio, (1901), page 18.

¹⁹ Lowdermilk's *History of Cumberland* (1878), page 52, 53.

General Braddock's march through Maryland in that year gives an illuminating picture of the Maryland roads of the day. While the physical



This map shows the line of march of General Braddock's troops on the way to the ill-fated campaign which ended in his defeat and death. One detachment under Sir Peter Halket marched from Alexandria to Cumberland by way of Winchester, Va. Colonel Dunbar's regiment, which was led by the general himself riding in a new chariot, took the road to Frederick, present-day Williamsport, Oldtown and Cumberland as here described.

recorded the distance as 45 miles and the time consumed as three days to Frederick.²¹

After a layover in Frederick, during which time he arranged with Benjamin Franklin to get him 200 additional wagons, his army headed westward.

The army followed the wagon road from Frederick to Watkins Ferry (the general route of present-day Alternate U. S. 40 through Braddock Heights and Boonsboro and on to Williamsport by State Route 68).

Here it crossed the Potomac by "float" and traveled 70 miles across northern Virginia (now West Virginia). The army re-entered Maryland by crossing the river near the mouth of little Cacapon River, four miles east of Town Creek. It proceeded to Cumberland by Cresap's road, now State Route 51.

Braddock measured the distance from Frederick to Cumberland as 129 miles and the time consumed as 11 days, including two of rest.

The distance today over U. S. 40 is some 90 miles and can be traversed by motor car in about two hours.

²⁰ Lowdermilk, *Ibid.*, page 114; Geological Survey Reports, Vol. III, page 136.

²¹ Braddock's Orderly Book, Lowdermilk, *Ibid.*, Appendix xviii, xxvii.

condition of the roads is not specifically recorded, they were adequate to transport his regiments in normal marching time. Accompanying his men were heavy artillery, hundreds of loaded wagons, thousands of horses and mules, together with women and camp followers.

The general himself rode as far as Fort Cumberland in a handsome chariot, or "coach and six," which he had just purchased from Maryland's Governor Sharpe.²⁰

Braddock's detachment entered Maryland from Alexandria, proceeded to Rock Creek (now a part of Washington) and marched north on the Georgetown-Fredrick Road. His Orderly Book re-

BRADDOCK WIDENS WASHINGTON'S ROAD

Washington's 6-foot roadway across the mountains west of Cumberland was considered too narrow for Braddock's artillery and wagon trains. He thereupon ordered it widened to twelve feet and a detachment of 600 men set out in advance to perform this task, following Washington's route over Wills Mountain.²²

Near the top of the mountain, however, a young English lieutenant named Spendelow observed a valley skirting the mountain-side which looked like an easy and natural way out of Cumberland.²³ Returning, he surveyed the passage from the ground and the result was the building of the Narrows Road, the first important re-location of what was to become the route of U. S. 40.

This road was built in four days by an engineer and 100 men and became the route for those elements of Braddock's troops which had not yet crossed Wills Mountain.



In 1755 the road west of Cumberland was widened to twelve feet to accommodate the heavy wagons of General Braddock on the march to his famous defeat. Here one of Braddock's officers directs the clearing of the right of way which first had been traced by the buffalo and later was an Indian trail.

²² George R. Stewart's *U. S. 40—Cross Section of the United States of America*. Boston, 1953, page 89; Jordan's, *The National Road (American Trail Series)* New York (1948), page 49.

²³ Thomas and Williams' *History of Allegany County*, *Ibid.*, page 24.

Spendelow's road through the Cumberland Narrows has become one of the most famous and picturesque travel-routes of America. It was followed by the railroads as well as by the later highway builders.

Following the present general course of U. S. 40 through Allegany and Garrett counties, Braddock's army marched leisurely westward while his men widened the road ahead.

In the meantime the French and Indians had time to reinforce and the results were what every schoolboy knows—Braddock's Defeat.

But the road remained, a military passage until 1789, a county road until 1811, then a national road and now a trans-continental highway.

COMPLETING THE ROAD FROM BALTIMORE TO CUMBERLAND

Following Braddock's ill-fated campaign, bands of Indians terrorized all Western Maryland and at least one group rampaged within 30 miles of Baltimore.

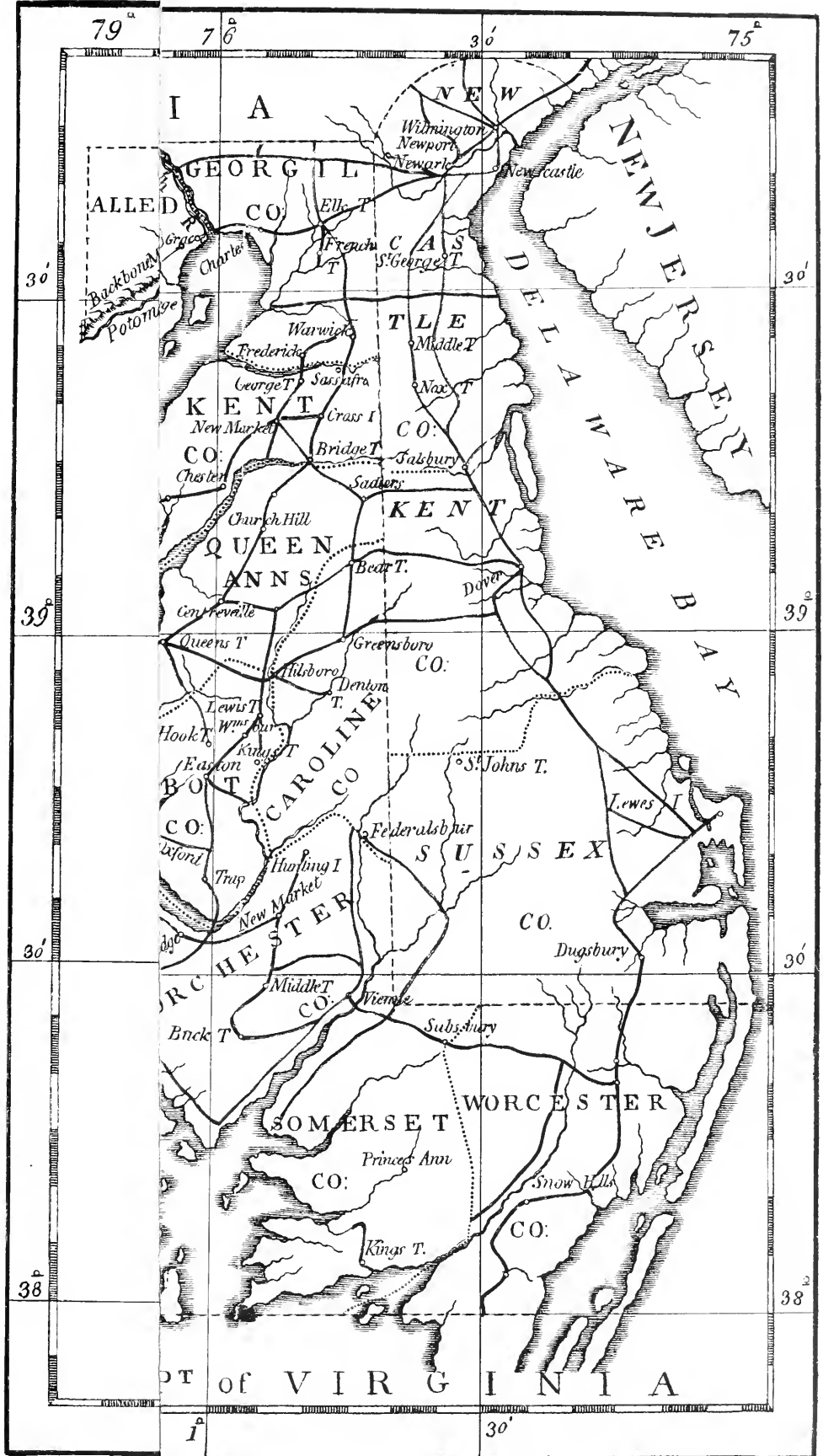
The Maryland Legislature of 1755 took immediate action and appropriated money to build a huge stone fort and a road leading to it, twelve miles west of Williamsport. Called Fort Frederick, this massive edifice is still standing and is enshrined as a state park on the Potomac, south of present-day Clear Spring on U. S. 40 in Washington County. The road they built, leading to it from the east, can be identified as the course of State Routes 68 and 56.

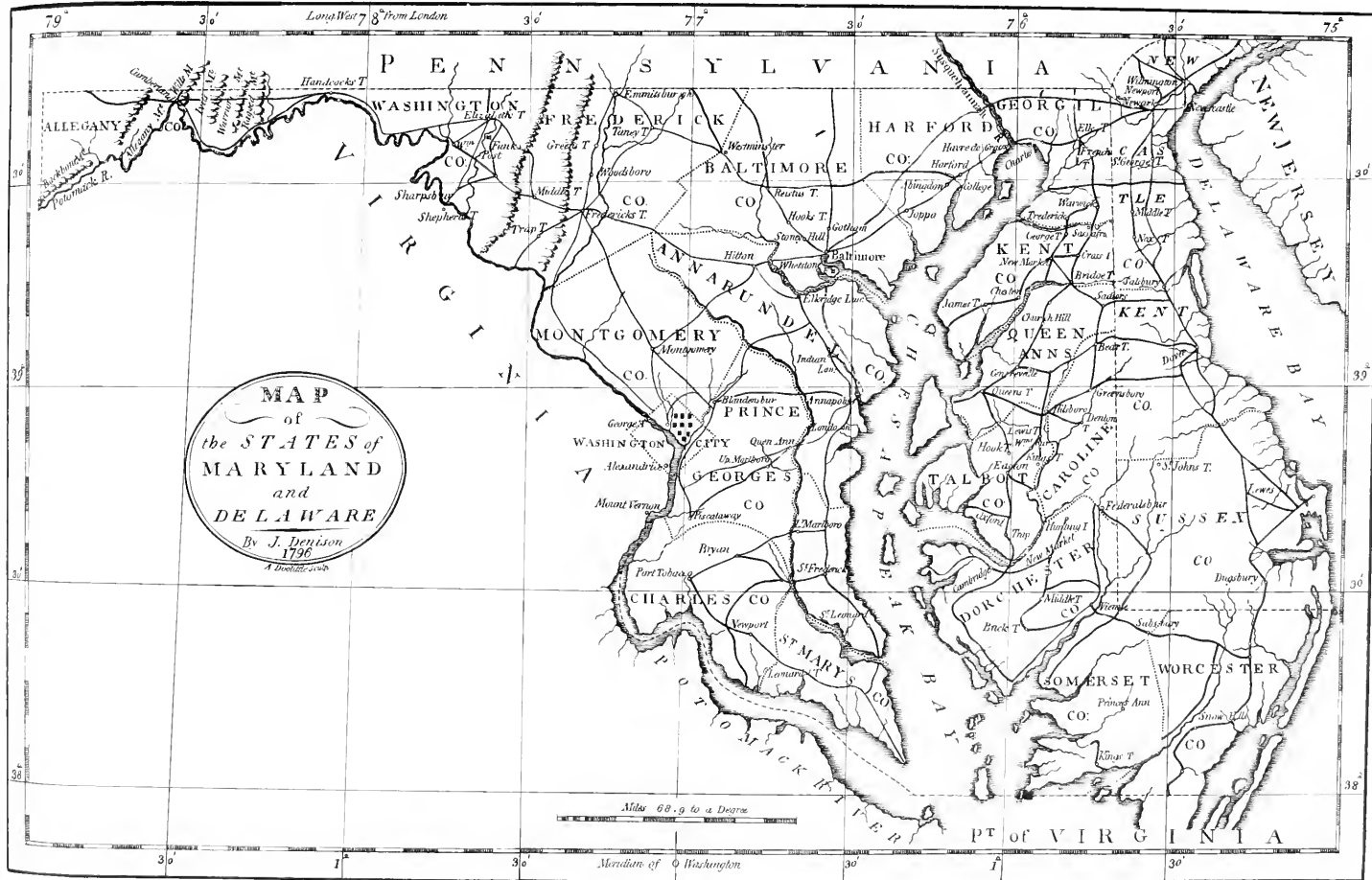
By now nearly all early settlers had fled from Allegany County but Fort Cumberland was recognized as a strategic military site. However, it was cut off from the rest of Maryland by high and roadless mountains.

This gap in the Maryland road system, that trackless stretch which caused Braddock's detour into Virginia, was filled a few years later by another appropriation of the Legislature as a war measure. A legislative committee which investigated the matter found that an all-Maryland route between Fort Frederick and Fort Cumberland would cut the travel distance between the two points from 80 to 62 miles. The road they built went through Hancock, followed the north bank of the Potomac and entered Cumberland by that same road past Colonel Cresap's place.

This was the first inter-county road built by the province and it was constructed as a military road to connect two forts in wartime. It was finished in the 1760's.

The legislative committee which recommended this rugged wagon trail over the mountains had a significant eye to the future. After pointing out the immediate need for prosecution of the war, it said the road also





would "induce many people to travel and carry on a trade in and through the province, to and from the back country."²⁴

This was prophetic language, as coming events demonstrated in the next century.

Thus the French and Indian War advanced the opening of Western Maryland by many years. This new road, together with Braddock's Road, both war measures, gave a direct if extremely rough connection between Baltimore, Annapolis and the far western parts of the province.

A third military road was built by Washington's troops in 1758.²⁵ It connected Cumberland with Bedford, Pennsylvania, to permit reinforcement of Fort Cumberland from the north. It is the present course of U. S. 220.

ROADS SYSTEM EXTENSIVE—BUT ROUGH

By the time of Washington's Farewell Address, Maryland's system of roads was extensive. But the roads themselves were wretched. They were always rough and frequently impassable. There was little or no maintenance despite stringent laws on the subject. Marylanders were on the move in all directions and they demanded better roads.

So the dawn of the Nineteenth Century witnessed the building of the first all-weather roads in the State, the turnpikes and the most famous of them all—the National Road west from Cumberland which now will be described.

²⁴ Maryland Assembly Proceedings, December 15, 1758, page 74; Geological Survey Reports, Vol. III, page 138.

²⁵ State Roads Commission Historical Marker No. 18.

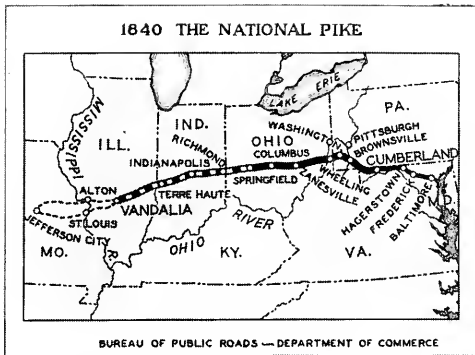


Scene on the National Road crossing Wills Creek at Cumberland about 1840. Here a Conestoga wagon drawn by six horses is passing a stage coach. The stone-arch bridge in the background was built by hand.

Chapter II

THE NATIONAL ROAD THAT OPENED THE WEST

America's great superhighway of the Nineteenth Century was the road that ran west from Cumberland, crossed the mountains, the Ohio River, the plains and almost reached St. Louis, Missouri.



It was the first and only interstate highway ever built by the federal government. It followed the trace of the buffalo, the trail of the Indian and the path of George Washington and General Braddock.

It is the route of U. S. 40 today.

The National Road started at Cumberland and ran nearly to St. Louis. Original plans were to continue it to Jefferson City, Mo., but the federal government stopped making appropriations before the famous pike reached the Mississippi River.

This road, cut through high hills and across deep gorges one hundred and fifty years ago, was the first great pathway of continental progress—the passage that penetrated the mountains and populated the middle west.

Because this national freeway had its beginning at Cumberland, it was of prime importance to Maryland and to the development of Baltimore in the early years of the Century. At its height the road carried the heaviest traffic ever handled up to that time by an American thoroughfare.

Four and six-horse wagons ran so close together that the lead horses were said to have their noses in the spare feed baskets hanging from behind the wagon ahead. Between these wagon trains came passenger stages, as well as droves of cattle, sheep and hogs.

Most of this traffic coming across the mountains from the West was headed into the markets and the port of Baltimore, the pay-off place for produce, the pot of gold at the end of the Appalachian rainbow.

The congressional act of 1802 by which Ohio became a state, together with subsequent legislation, appropriated two percent of the money derived from federal land sales in the new state for the purpose of building roads "from the navigable waters emptying into the Atlantic to the river Ohio."¹ In 1806 Congress formally authorized the road, specifying that it should start at Cumberland and run to the State of Ohio.²

FOUR CITIES ARE CONSIDERED

The congressional committees that worked on the matter followed the law by considering four other starting points, all of which were on navigable waters leading to the Ocean. They were Philadelphia, Baltimore, Washington and Richmond, all well established and thriving port communities.³

Cumberland, which was a frontier village at the time, just recently recovered from the ravages of Indian raids, was on the Potomac River. The Potomac was not then and is not now "navigable waters" in its upper reaches. Cumberland made no effort to get the road and never considered itself eligible under the law.

WHY CUMBERLAND?

Then why was this little town picked as the beginning point of the Nineteenth Century's greatest highway?

The selection obviously was a congressional compromise dictated by expediency, economy and geography. Philadelphia and Baltimore were rival ports, each struggling for supremacy. For the Government to select one as a terminal would inevitably alienate the other.

Since the money to be derived from the sale of public lands was indefinite and at that point non-existent, the farther west the road started the less money would be needed.

The fact that the Potomac was not navigable did not seem to enter the picture.

An over-riding factor in the selection of Cumberland was the initiative and zeal of Maryland in her road-building program.

As previously noted, through roads already existed before the close of the Eighteenth Century from Cumberland to Frederick and from that

¹ Act of Congress, April 30, 1802; Act of Congress, March 3, 1803; Geological Survey Reports, Vol. III, page 181, 182.

² "An Act to Regulate the Laying and Making a Road from Cumberland, in the State of Maryland, to the State of Ohio." Act of Congress, March 29, 1806; Geological Survey Reports, Vol. III, page 183.

³ Jordan's *The National Road* (American Trail Series), New York (1948), page 73.

town east to Baltimore and south to Georgetown, which by then had become a part of the new capital of Washington.

By 1805, when the final Senate report⁴ was presented to Congress, Maryland had definite plans to improve these roads by hard-surface turnpikes with easy grades over the mountains. Already a charter had been granted and an impressive start made on an all-weather road from Baltimore as far west as Boonsboro.

The Cumberland starting point, it was concluded, thus would serve both Baltimore and Washington and, through Washington, the Richmond area. Philadelphia's geographical position was against her, the relative distances being carefully noted by the senators.

The bill to establish the road finally passed Congress in 1806 but it had rough going in the House. Both Pennsylvania and Virginia bitterly fought the Cumberland terminal. The Quaker State voted against it 13 to 4 while Virginia opposed it by a vote of 16 to 2. It finally passed with Maryland's militant leadership, Ohio's full blessing and scattered votes from other states.⁵

WESTWARD HO!

The first contract was let in 1811 and the road was opened to Wheeling on the Ohio by 1818.

Although the roads east of Cumberland were far from complete by that time, U. S. mail coaches immediately began service between Washington and Wheeling and were followed over the mountains by a continuous stream of traffic which increased year by year. Forging westward, the road reached Columbus in 1833 and the Indiana state line five years later.

In 1838 Congress made its last appropriation for The National Road. By that time it had been "grubbed, graded and bridged" across the entire State of Indiana and in Illinois the right of way had been established as far as Vandalia, where some clearing was done.

Work on the road stopped but not the traffic. It kept moving west over whatever roadbed it could find.⁶

THIRTEEN THOUSAND A MILE

The federal government spent \$6,824,919 on both the finished and unfinished parts of the highway from Cumberland to Vandalia. Of this

⁴ U. S. Senate Reports. Ninth Congress, First Session, Report No. 195; Jordan, *supra*, page 74; Geological Survey Reports, Vol. III, page 182.

⁵ Jordan, *supra*, page 74.

⁶ Stewart's U. S. 40—Cross Section of the United States, Boston (1953), page 116.

amount about \$1,700,000 was spent on the section between Cumberland and Wheeling, an average cost for the 132 miles of about \$13,000 a mile, including extensive rebuilding in the 1830's.⁷

The road was built on a cleared right of way 66 feet wide. Roots were "grubbed and grunted" out, ditches dug and a 30-foot roadway leveled. Their equipment was picks and shovels with oxen and horses to pull out the stumps. Hills were cut down, hollows and valleys filled. Their specifications called for a maximum five percent grade and with some exceptions they attained this objective.

A distance of twenty feet of the roadway surface was covered with irregular-sized stones to a depth of twelve to eighteen inches. Over this was strewn smaller stone. This stone was broken on the roadside by gangs of men sitting on the hard ground, using one-pound hammers.⁸ Other gangs built bridges, the stone masons hand-cutting and fitting each stone separately.

Throughout the building of the road "traffic was maintained," not because of courtesy to the public but because there were no detour roads and the people could not be stopped in their push to the West.

Wagons loaded with chests and children picked their way through the construction work and the travelers camped at night beside the road laborers.

There was no provision in the law for payment of right of way claims. Most farmers were glad to have the road come through; but where one balked he had to be talked into it or the road carried around his poorly-defined boundaries, adding more curves to the mountain passes.

The road was built according to the best standards then known to American engineers. It was hailed as the finest in the United States and its heavy stone foundation was compared to the Appian Way.

EARLY COLLAPSE OF THE ROAD

Yet before the road reached Wheeling serious faults and abuses were reported by David Shriver, the young Marylander who was superintendent of construction.

Locking wagon wheels cut deep ruts in the loose stone finishing. Landslides and heavy rains cut holes and ridges across the road. In 1815 the sum of \$1200 of construction funds had to be used to repair the first 16

⁷ John Pendleton Kennedy's *The National Road—Cumberland to Wheeling, A Documentary History*. Los Angeles, Cal. (1934) pp. 1-718 (Library of the U. S. Bureau of Public Roads, Washington, D. C.); Thomas B. Searights' *The Old Pike, Uniontown, Pa.* (1894), pp. 100-106.

⁸ Jordon, *supra*, page 84 *et seq.*

miles out of Cumberland, as Congress had provided no money for maintenance.

During the 1820's Congress appropriated hundreds of thousands to push the road across Ohio but nothing for repairs to the Cumberland-Wheeling section.

In 1823 the Postmaster General observed that the road would "cease to be useful unless repaired."⁹ By 1826 the loose stones on the rock base were almost entirely washed away, or sunk under the foundation, leaving the large stones on top. In places, even the foundation was gone, leaving broken links in the road. It was reported that on the eastern slope of Big Savage Mountain hardly a handful of earth was left and the culverts, drains and ditches were filled with the loose stones.

Shriver complained that natural depreciation was bad enough but the depravity of man was worse. Bridge walls had been pried off, gravel from the road stolen for personal use, fences, yards and gardens built inside the right of way and even the course of the road altered by adjoining property owners.¹⁰

U. S. GIVES IT TO THE STATES

The future of the road as a federal highway looked black from the day in 1822 when President Monroe vetoed a bill for its "preservation and repair," a measure that would have set up a federal toll system to make the road pay-as-you-go.¹¹ In 1832 Congress passed an act transferring the road to the states through which it passed.¹²

Maryland and Pennsylvania accepted the road only on condition that the federal government repair it to their satisfaction and pay for the erection of toll houses and gates. In 1834 Congress agreed to these terms and placed Army Engineers in charge of the job.

ROAD COMPLETELY REBUILT

Maryland's Governor James Thomas insisted that the road be completely rebuilt by the new macadam process which, for the first time in the United States, had been used a few years earlier on the Boonsboro-Hagerstown Turnpike (*post*, page 33).

⁹ Report on the Cumberland Road, House Executive Documents (1823), Seventeenth Congress, Second Session, Documents 3, 16; Jordan, *supra*, page 98.

¹⁰ Jordan *supra*, pp. 97-100.

¹¹ Messages and Papers of the Presidents (Richardson), Vol. II, page 142 (May 4, 1822); Geological Survey Reports, Vol. III, page 185.

¹² Twenty-second Congress, First Session, Chapter 153.



Rebuilding the National Road in 1834. Workmen sit on the ground breaking stone with a small hammer. The inspector at left is testing the stone to see if it will pass through a 3-inch ring. The one next to him is weighing each stone to keep it down to 4 ounces. At right laborers spread the fine stone on the prepared roadbed with horse rakes. The surface was rolled smooth and compacted by the traffic that used it. The steam roller had not been invented.

Thus the great road west of Cumberland—"the Appian Way of America"—was completely uprooted down to its lowest foundation stones 20 years after it was built.

The young engineers of the War Department, many of them West Point graduates, tackled the task with vigor and enthusiasm. They lifted the entire pavement from the old road and deposited it stone by stone off the roadbed. They drained and graded the new bed so that it was three inches higher in the middle than at the sides. Ditches were dug so that the highest level at which water could stand was 18 inches below the lowest part of the surface of the road.

The old roadway had been paved to a width of 20 feet. The new surfacing was 30 feet wide. Composed of limestone, flint or granite, the stones were broken by hand to a size so small they could pass through a three-inch ring and to a weight not more than 4 ounces. This stone was spread over the graded earth roadbed by horse-rakes to a uniform depth of three inches.

Then traffic was allowed to compact it. After a time another such layer was spread and compacted, and then another. This gave a 9-inch

small-stone surface rolled hard by the wheels of many Conestoga wagons.¹³

The difference between the macadam method and the earlier construction was in the use of the small stones throughout, so thoroughly compacted that they formed practically a solid base. The new system was a success.

RELOCATED THROUGH THE NARROWS

The first section of the National Road leading out of Cumberland in 1811 had run out present Greene Street and over Wills Mountain.

Captain Richard Delafield, senior Army Engineer on the job, returned to the Braddock route through the Narrows when he rebuilt the road in 1834. He reported that this road, which ran out Mechanic and Center Streets and was a little longer, required "very few culverts and only two small bridges over Braddock's Run of about 15-foot spans each."¹⁴ He decided to use the level and smooth bottom of the creek for the road by building a 10-foot wall, throwing the stream on the opposite bank.

Thus for the second time in 80 years the road was relocated to utilize the level spaces of the famous Narrows.

HEAVIEST TRAFFIC IN THE COUNTRY

By 1837, when the road had been macadamized throughout its entire length to Wheeling and beyond, the Pike was said to have reached its peak of perfection.

Traffic was the heaviest in the United States. The stages stopped at inns about twelve miles apart. There were wagon stands or taverns every mile or so all along the road from Baltimore to Wheeling. Here a wagoner, for an overnight bill of \$1.75, could get grain and hay for a 6-horse team, room and board for himself plus "all the whiskey he could drink."¹⁵

NOW A STATE TOLL ROAD

The State took over administration of the road in 1835 and operated it as a toll facility. It set up two toll houses, one just west of Cumberland (the brick octagonal building still standing) and the other west of Frostburg (the building is gone but the toll gate posts stand today).

The statute provided for the appointment of a superintendent of the road and such "toll gatherers" as may be necessary. All tolls, after deducting the collection expenses, were to go to the repair and preservation

¹³ Jordan, *supra*, page 101.

¹⁴ Kennedy's *The National Road, supra*, page 532.

¹⁵ Searight's *The Old Pike, supra*, page 16.

of the road. If there was surplus it went into the State Treasury in a special account called "The United States Road Fund."¹⁶

The tolls were set on the road-use principle followed today on the new turnpikes (trucks pay more than passenger cars, 4-axle vehicles more than 2-axle, and so on). A score of cattle (12 cents) cost more than a score of sheep (6 cents). Horse and rider were 4 cents, a sulky driven by one horse 6 cents, while a 4-wheel coach with 2 horses cost 12 cents.

Wagons were charged according to the width of their wheels as it was thought that narrow rims tended to rut the road. Thus if the rims were between four and six inches wide, the fare was 3 cents, if between six and eight inches wide 2 cents, while wheels exceeding eight inches in breadth were given a free ride.¹⁷ They acted as rollers and so protected the road surface.

BELLS ON THE HORSES' NECKS

Partly to avoid payment of tolls huge wagons were built with rear wheels ten feet high and tires twelve inches broad. These mammoth



Scene of the National Road as it appeared in 1915.

¹⁶ Thomas and Williams' History of Allegany County (1923), page 185.

¹⁷ Toll-board (still standing). Maryland Toll House, U. S. 40, five miles west of Cumberland.

freight wagons were driven by twelve horses and were capable of carrying 10-ton loads.¹⁸

The road was literally filled with gaily painted stages, droves of animals and canvas-covered wagons with bows of bells over their horses' collars. As one traveler noted: "Within a mile of the road the country was a wilderness, but on the highway the traffic was as dense and continuous as on the main street of a large town."¹⁹

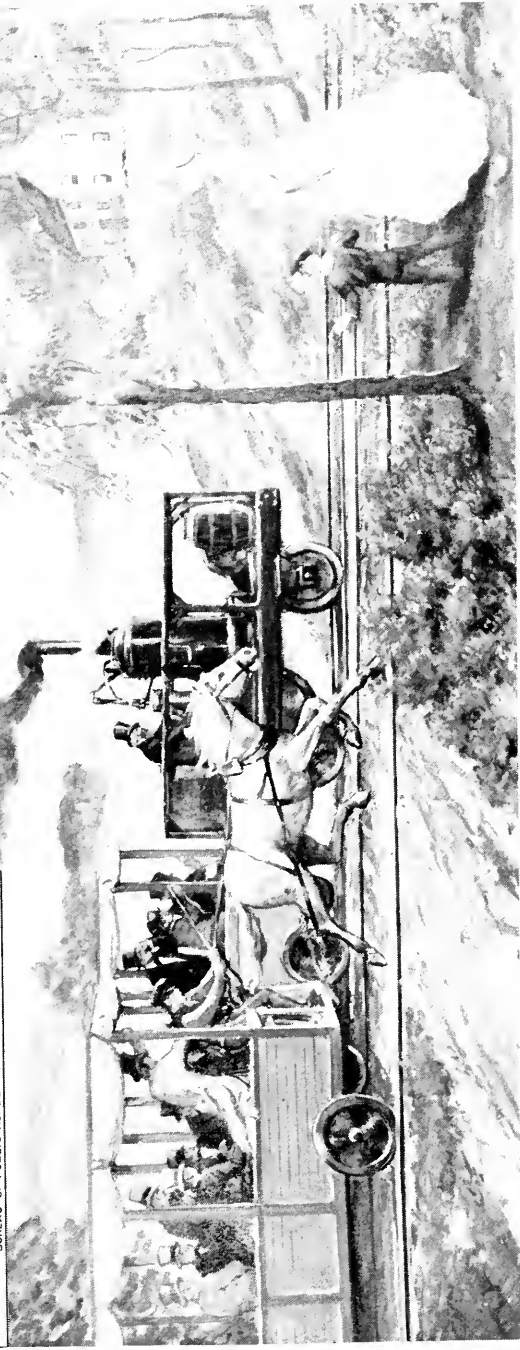
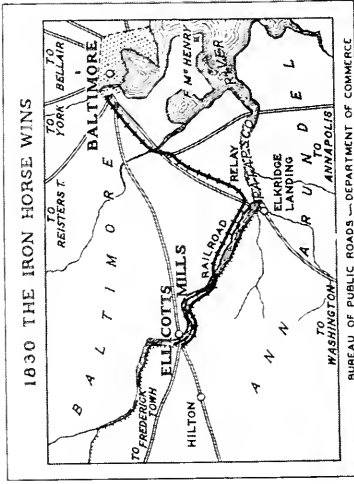
The road not only was colorful and picturesque; it opened the West years ahead of the railroad and had a profound impact on the economy of early Maryland and the growth of the Port of Baltimore.

Yet the National Road was but half the story. For Cumberland stands midway between Baltimore and Wheeling on the Ohio.

The other half is the road to the eastern part of the State.

¹⁸ F. J. Wood's *Turnpikes* (1919), page 22.

¹⁹ *Harpers Monthly*, November 1879, "The Old National Pike."



The death knell for the turnpike was sounded by the advent of the railroad and its slow westward march during the first half of the last century. This scene shows the famous race in 1830 between Peter Cooper's Tom Thumb steam locomotive and a horsedrawn railroad coach. The race was run on the Baltimore & Ohio Railroad's right of way between Baltimore and Elliott City (see map). The settlement of Relay was so named because it was the first stop for changing horses eight miles west of the city.

Chapter III

THE ROAD THE MARYLAND BANKS BUILT

Perhaps the strangest chapter in the history of Maryland roadbuilding—and of Maryland banking too, for that matter—is the story of the turnpikes the Maryland banks built to connect Baltimore with Cumberland.

The National Road to the west had been commenced at Cumberland on the assurance that Maryland was building a hard-surface road to connect it with Baltimore. Without such a connection the great western road would have been quite meaningless.

DAWN OF THE TURNPIKE ERA

It was an interim period when the needs of the times called for stone roads to promote commerce but the people were not yet ready to appropriate money for the purpose.

To fill this breach, a number of private companies were organized in the State to build hard roads and finance them by tolls.

In 1805 the Baltimore and Frederick Town Turnpike Road had incorporated with an initial capital of \$220,000 to build an all-weather road from Baltimore through Frederick to Boonsboro in Washington County, a distance of about 62 miles. Work commenced immediately and by 1808, when Secretary Gallatin made his report to the United States Senate, he was able to state that 20 miles out of Baltimore were finished, at a cost of \$9,000 per mile, and that 17 additional miles were under construction at \$7,000 per mile.¹

This example of Maryland enterprise was impressive and there were those in the halls of Congress who predicted that the Baltimore turnpike would reach Cumberland before the National Road was ever begun.

However, quite the opposite was true.

The federal road crossed higher mountains and reached Wheeling in 1818 before some sections of the Baltimore turnpike were even started.

¹ Geological Survey Reports, Volume III, page 170.

The plain fact was that no Maryland capital wanted to tackle the mountains of Western Maryland. To Baltimore in 1808 the rugged peaks of Sideling Hill, Town Hill, Polish and Martin Mountains must have seemed as impregnable as the Alps.

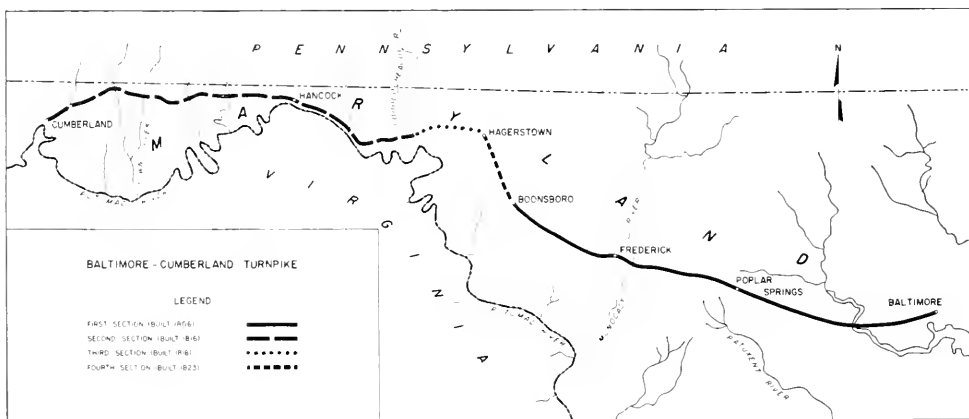
The logical candidate for the task was the Baltimore-Frederick Company which was building the road to Boonsboro. Jonathan Ellicott, however, speaking for this organization, declined the honor and suggested that the State or federal government build it.²

The turnpike dead-ended at Boonsboro for a number of years while a debate raged as to whether the main road would go through Hagerstown or take the shorter, more direct route nearer Williamsport. In any event, it would cross the Conococheague River about 8 miles west of Hagerstown and this seemed a good place to start the road to Cumberland— if the money could be found.

THE BANKS ARE CALLED ON

The money was found, in the coffers of Maryland banks—money that belonged to depositors and stockholders. This capital was virtually confiscated by the Maryland Legislature under circumstances which are unique to this day.

Bank charters in the early Nineteenth Century were not perpetual as they are today but were renewable periodically by the Legislature. In the session of 1812 sharp-eyed legislators noted that all bank charters in the State would expire in 1816 unless renewed.³



² *Ibid.*, page 171.

³ Williams, *History of Washington County* (1906), Vol. I, page 151 *et seq.*

They also were extremely worried about the Baltimore-Cumberland road. The first ten miles of the National Road were already under construction and Maryland did not even have a sponsor for its mountain crossing, estimated to cost over \$400,000.

“Who in Maryland besides the banks,” asked one Senator, “has that kind of money?”

So the banks were called on to finance and build the road, on penalty of being put out of business. They bitterly resisted, pointing out that such tactics were unprecedented, that the money was held in trust for depositors and that by law and custom they were required to invest it conservatively. The Pike, they said, was practically wildcat speculation.

However, the Legislature passed the bill which extended all bank charters until 1835 and required those named in the statute to subscribe to stock in a new turnpike company “in proportion to their respective paid-in capitals for as much stock as will cover the expense of completing the road.”⁴

The same bill imposed an additional tax on the helpless banks of 20 cents on every \$100 of their capital stock for the establishment of the public school system of Maryland—a story in itself.

The banks undertook the strange assignment reluctantly but with good grace and good business practices. Their first act was to incorporate a company called the Cumberland Turnpike Road to which they subscribed to stock as required by the statute in the following amounts:⁵

Union Bank of Maryland -----	\$142,353.00
Bank of Baltimore -----	75,413.00
City Bank of Baltimore -----	54,585.00
Mechanics Bank of Baltimore -----	42,938.00
Commercial & Farmers Bank of Baltimore -----	41,059.00
Farmers & Merchants Bank of Baltimore -----	31,197.00
Franklin Bank of Baltimore -----	27,842.00
Bank of Maryland -----	20,127.00
Hagerstown Bank -----	16,722.00
Marine Bank of Baltimore -----	15,766.00
Conococheague Bank -----	10,566.00
Cumberland Bank -----	7,547.00
	<hr/>
	\$486,165.00
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⁴ Acts of 1812, Chapter 79; Acts of 1813, Chapter 122.

⁵ Thomas and Williams, History of Allegany County (1923), page 108.

BANK ROAD COMPLETED IN 1821

They completed their plans and surveys, drew specifications and were ready to advertise for bids by the end of 1815. Work commenced the following spring and the famous Bank Road entered Cumberland five years later.

There is no surviving record of the actual road construction but an indication may be found in the minimum standards set by statute. The road was to be paved at least 20 feet wide on an artificial roadbed of "wood, stone or gravel well compounded together a sufficient depth to secure a solid foundation." The surface was to be gravel or pounded stone "so as to secure a firm, and, as near as possible, an even surface."

Grades were not to exceed four percent except over certain mountains where "an angle of six degrees will be tolerated." (Grades actually were built eight percent and steeper over some ranges). Perpetual maintenance was required "to keep the same in good and perfect order and repair."⁶

The road ran a distance of 58 miles westward from the west bank of the Conococheague.



View of the old Bank Road (taken in 1915).

⁶ Acts of 1815, Chapter 125.

HAGERSTOWN TO THE FORE

The construction of these two turnpikes connected Baltimore with the National Road at Cumberland, except for the 15-mile section between Boonsboro and the west bank of the Conococheague. Several private groups were interested in this project which would have passed south of Hagerstown, nearer Williamsport.

But Hagerstown, while off the direct route, was not to be neglected.

In 1818, to be sure it was not bypassed, it organized the Hagerstown and Conococheague Turnpike Company and built a toll road from the Hagerstown public square to the west bank of the Conococheague, including a fine stone arch bridge over this stream.⁷ The road was finished in 1819.

THE BANKS BUILD ANOTHER ONE

There still remained, however, an embarrassing gap in the Pike, the relatively short section from Boonsboro to Hagerstown. Travelers told of taking five to seven hours to cover the ten miles in bad weather over this only unpaved stretch of the whole 268 miles from Baltimore to Wheeling.

While private interests bickered, the Legislature of 1821 again called on the State banks to fill the breach. It agreed to extend bank charters another ten years—to 1845—if they would build the road.

The Baltimore banks were in serious trouble at the time and the City Bank had closed its doors as a result of the 1819 panic.⁸ They did not relish these legislative hold-ups but on the other hand, having finished the Cumberland road, they saw the importance of protecting this investment by paving the last ten miles on the whole throughway.

They incorporated a company known as the Boonsboro Turnpike Company, with the same subscribers as before except the City Bank of Baltimore, the Conococheague Bank and the Cumberland Bank.⁹

FIRST MACADAM IN U. S.

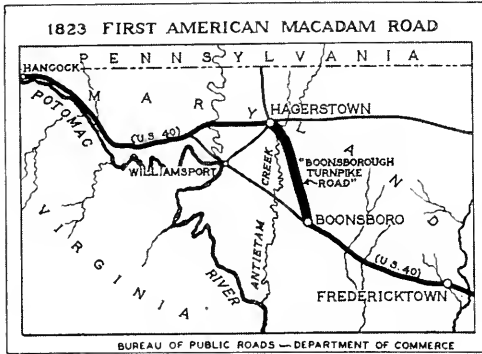
To the Maryland banks go the distinction of introducing macadam into the United States. This road-building process which has been described in Chapter II had just proved its effectiveness in England where it was invented and first applied by the Scotchman, John Loudon McAdam.

⁷ Scharf, *History of Western Maryland* (1882), Vol. 2, pp. 995-998.

⁸ Owens, *Baltimore on the Chesapeake* (1941), page 225.

⁹ Scharf, *History of Western Maryland* (1882), Vol. 2, page 997.

For the first time in this country it was used to pave the Hagerstown-Boonsboro Pike in 1823.¹⁰



The heavy line shows the route of the first macadam road. It was built as a toll highway by a group of Maryland banks.

fication in the State.¹¹

With the completion of this section and the rebuilding of the National Road in the 1830's, Maryland could boast of the finest all-weather road in the United States and one of the longest. As the new road sections opened, both passenger and freight traffic increased.

Fast stages carried passengers over the smooth new paving. In 1825 the passenger rates were \$2.00 from Baltimore to Frederick, \$2.00 from Frederick to Hagerstown, \$5.00 from Hagerstown to Cumberland and \$8.25 from Cumberland to Wheeling.¹²

BALTIMORE PROSPERS FROM THE ROAD

The effect of this traffic on Baltimore was prodigious. Its population had increased 500 percent in 30 years and in 1830 stood at 80,625, against Philadelphia's 80,462.¹³

Jared Sparks, the famous biographer of Washington, said of Baltimore in 1825: "Among all the cities of America, or of the Old World, there is no record of any one which has sprung up so quickly or to so high a degree of prominence as Baltimore." The reasons he gave were "the energetic spirit of the people," the fast sailing vessels, the geographic situation "presenting the nearest market to the western country" and

¹⁰ Historic American Highways, a publication of the American Association of State Highway Officials, Washington (1953), page 52.

¹¹ Williams, History of Washington County (1906), Vol. I, page 155.

¹² Scharf, History of Western Maryland (1882), Vol. 2, page 1336.

¹³ Owens, Baltimore on the Chesapeake (1941), page 244.

The road was finished the following year and the "Baltimore Pike" was complete.

ALSO FIRST ROADSIDE PLANTING

This short stretch of road may also claim another first. In 1827 the citizens of Hagerstown and Funkstown planted an avenue of Lombardy poplars along both sides of the road between the two towns, a distance of three miles. Although all of them died, this is the first known act of roadside beautification in the State.

the seven turnpikes entering the City. "And now," he continued, "the line of communication is complete between Baltimore and Wheeling over one of the best roads in the world."¹⁴

BUT DO THE BANKS?

But what of the banks of Maryland? Did they win or lose by their forced flyer in the road-building business?

In one of their reports during construction they said, "The Company has but one grievance to complain of, and that is being compelled to make this road. It is a severe and oppressive tax upon the banks, and one which, under present circumstances, their business does not enable them to meet without great embarrassment."¹⁵

However, after the two bank roads were finished, they found they had a natural money-maker. The huge traffic and great prosperity that flowed through Cumberland, Hagerstown and Frederick had to pass through their toll gates. Other turnpikes complained of "shun-pikers," travelers who in good weather used parallel free roads.

Not so the bank turnpikes. They had an absolute monopoly. Theirs was the only road over the mountains.

They paid dividends as high as 20 percent for many years and the road paid for itself over and over again.¹⁶

The road never lost money. Before that day arrived the banks folded their toll gates and silently stole away.

As one writer said in 1879: "So far from being a burden to them, it proved to be a most lucrative property for many years, yielding as much as twenty percent, and it is only in later years that it has yielded no more than two or three percent."¹⁷

SPREAD OF THE TURNPIKES

The turnpike fever in Maryland was severe but localized. It ran for over a hundred years. The Eastern Shore and Southern Maryland had no turnpikes at all, except one in Cecil County. Ninety percent of them were located in Baltimore, Carroll, Frederick and Washington counties.

The seven turnpikes mentioned by Jared Sparks as contributing so much to the prosperity of Baltimore in 1825, together with their modern route numbers, were Baltimore to Havre de Grace (U. S. 40), Baltimore

¹⁴ North American Review (1825), Vol. 2, page 99.

¹⁵ Geological Survey Reports, Vol. III, page 175.

¹⁶ Scharf, History of Western Maryland (1882), Vol. 2, page 1331.

¹⁷ Mark Searle, Turnpikes and Tollbars (1879), Vol. II, page 847.

to Bel Air (U. S. 1), Baltimore to Bladensburg and Washington (U. S. 1), Falls Road (State Route 25), Baltimore to York (U. S. 111), Baltimore to Frederick and the west (U. S. 40) and Baltimore to Reisterstown (U. S. 140).

The last named forked at Reisterstown, one branch continuing to Westminster and Gettysburg (U. S. 140) and the other to Hanover (State Route 30).

Frederick and Hagerstown were hubs of turnpike wheels with spokes leading out in all directions.

Hagerstown's most ambitious project, started in 1816, was a direct 40-mile run east to Westminster to connect with the above-mentioned Baltimore road. It was claimed that this route was four miles shorter to Baltimore than by way of Frederick.

Another was chartered in 1828 to run from Hagerstown to Gettysburg. Here it connected with the Pennsylvania system. It was advertised that travelers from Philadelphia to Wheeling had an uninterrupted drive over all-weather roads of 333 miles.¹⁵

THE RAILROAD CASTS A LONG SHADOW

The supremacy of the Maryland turnpike reached its peak in the first half of the Nineteenth Century, a period which coincided with the growth of Baltimore from a collection of little villages around the head of the Patapsco River to the nation's second city.

On the Fourth of July 1828 aged Charles Carroll of Carrollton, one of Maryland's original signers of the Declaration, helped fellow Baltimoreans lay the cornerstone for the construction of America's first rail line. The Baltimore and Ohio Railroad, as its name suggests, was designed to tap the rich Ohio valley for the benefit of Baltimore merchants and shippers.

It thus was planned as a direct and modern competitor of both the Bank roads and the National Road.

The shadow of the iron horse lengthened over the turnpike year by year as the railroad chugged slowly but majestically westward, freeing town after town from utter dependence on stages, wagons and hard-surface roads.

In 1842 the B. and O. reached Cumberland, in 1853 Wheeling, and the golden age of the turnpike had passed.

A Baltimore merchant would not ship by wagon over the mountains when the railroad could deliver his product quicker, safer and cheaper.

¹⁵ Scharf, History of Western Maryland (1882), Vol. 2, page 996.

The stagers and wagoners on the great National Road bitterly fought the competition of the new steam engine, cutting costs, slashing rates and playing up the glamor of the turnpike and the taverns dotting its roadsides.

For all of them stood to be put out of business by the mechanized behemoth on rails.

TWO MAIN TOLL ROADS CLOSE

The State's two toll houses on the Pike between Cumberland and the Pennsylvania line north of Keyzers Ridge steadily lost revenue. By 1870 the "United States Road Fund" in the Maryland Treasury was exhausted, the road needed repairs and there was no money for the job.

A bill was introduced in the Maryland Legislature requesting an appropriation of \$27,000 "to restore the Pike." After much debate and an opinion from Attorney General Jones the request was turned down.¹⁹

The road and its early glory had departed.

In 1879, with the consent of Congress as required by earlier legislation, Maryland bowed out of the toll road business. The toll houses were closed, the gates removed and the road abandoned to Allegany and Garrett counties.²⁰ It remained as a little-used country road until the dawn of the Auto Age and the coming of the State Roads Commission.

Now it is part of a transcontinental highway starting in Atlantic City and ending in San Francisco. Today it re-lives in some measure the color and glamor of its youth.

In 1889, ten years after the toll gates came down on the National Road, the Bank Road also ceased to operate as a turnpike. A storm had wrecked all the bridges between Conococheague River and Sideling Hill and the banks did not rebuild them. Instead they surrendered their charter and the famous old road reverted to Washington and Allegany counties.²¹

BUT TURNPIKE ERA NOT YET OVER

It will be noted that the toll roads here mentioned were for comparatively long distances, inter-county and inter-state. It was such roads as these that were put out of business by the railroads.

But the turnpike era did not end in Maryland with the coming of the steam engine on tracks. It merely changed character. Even more turnpikes sprang up as short-distance feeders to the rail lines.

In 1850 there were 263 miles of turnpike roads in the State.

¹⁹ Thomas and Williams, *supra*, page 186.

²⁰ Jordan, *supra*, page 175.

²¹ Williams, History of Washington County (1906), Vol. 1, page 158.

By 1900, when travelers were paying about \$140,000 a year in tolls, there were 497 miles operated by 51 separate companies, an average of less than ten miles per turnpike. Indeed, 15 companies operated lines of less than 5 miles and one in Washington County ran only 1.3 miles.²²

Yet all of them served a need, to get the farmer to market, and so set the style for the Twentieth Century.

²² Geological Survey Reports, Vol. III, pages 178, 262.

Chapter IV

THE GOOD ROADS MOVEMENT

By 1900 there were 14,483 miles of roads in Maryland of which 13,118 miles were dirt¹—which meant mud in wet weather and dust in dry weather.

Of the remaining 1,365 miles of improved roads in the State, 890 were stone roads, 225 were surfaced with gravel and 250 miles were spread with oyster shells.²

At the 1900 estimate of 58,000 bushels of shells per mile, this meant the use of 14,500,000 bushels for construction of the 250 miles. Maintenance consumed another 2,000 bushels per mile each year. The result was a satisfactory, if soft, crunchy surface in wet weather; in dry spells the oyster shell surface was hard and dusty—a fine, white, powdery, adhesive dust that penetrated the nostrils of both man and horse and permeated the clothing of the traveler.

Of the stone roads, 497 miles were operating toll roads and 130 abandoned turnpikes, leaving only 263 miles which had been built by Maryland's counties.

Some of these stone roads were in frightful condition and were being bypassed in favor of dirt roads. For instance, on the Rockville Pike, a stone turnpike which had lapsed to Montgomery County, wagon traffic had cut its own dirt trail along the roadside, a track so worn by years of use that it had sunk 12 feet below the surface of the rough stone road.³

THE DARK AGES

The last half of the Nineteenth Century has been called the Dark Ages of American roads. The rail lines were in complete dominance and filled the bill for all but local traffic.

Yet it was this local traffic that sparked a move during the Nineties to get Maryland out of the mud. The movement was strictly rural at

¹ Geological Survey Reports, Vol. III, page 191.

² *Ibid*, page 204.

³ *Ibid*, page 416.



The aim of the Good Roads Movement was to get Maryland out of the mud. Here a farmer labors his team over the last hundred yards to the railroad station.

first. Since time immemorial farmers in most localities had been cut off from town in winter and during spring thaws. This isolation kept them not only from market but from church, school and the numerous social gatherings of the period.

The stone roads built on the macadam principle were few and far between. But many farmers had seen samples of them; and some actually lived on them. As one farmer said: "I would not sell my house and accept another worth \$7,000 as a gift and be obliged to live in it two miles from a macadam road. No farmer in the neighborhood would buy a farm not located on a macadam road. Now that they have a sample of the road they all want it."⁴

THE DAY OF THE BICYCLE

The farmers were joined in their clamor for good roads by a new and unexpected element of the population. The bicycle fever was sweeping



The bicycle craze was at its height in the later part of the Nineteenth Century and the early part of the Twentieth. The demand for smooth pavements helped spark the Good Roads Movement.

A group of cyclists seem to be confused by the broken road sign. One is trying to figure out their location from a map. Another prefers the easier way—ask the farmer.

Road Convention, the Road League and numerous influential individuals such as Conway W. Sams and Samuel M. Shoemaker.⁵ Their approach to their mission was a time-honored one.

They went to the Legislature for an appropriation (\$10,000), a study by impartial experts and a report or recommendation. They intended

America. They were as noisy a group, and as enthusiastic and determined, as the later auto clubs. They needed smooth roads near the towns to show off their new, low-lined two-wheelers. There were literally thousands of bicycle clubs, races, shows and associations. They organized nationally as the League of American Wheelmen, which had a membership in Maryland of 30,000.

The automobile was still a sputtering novelty, its huge potential quite unforeseen. It had nothing to do with the revived interest in road-building in the Nineties.

The march for macadam in Maryland was led by the farmers' clubs, the bicycle league, the State

⁴ *Ibid*, page 400.

⁵ *Ibid*, page 30.

to convince the public, and through it the Legislature, that good roads were good business and worth many good dollars.

THE CONTRIBUTION OF THE GEOLOGICAL SURVEY

In 1896 the Legislature had set up a small agency to investigate and report on the various types of geological material found in the State. It was called the Maryland Geological Survey Commission and its superintendent was William Bullock Clark, State Geologist.



Mr. Clark

The farmers and the bicyclists hitched their good roads movement to this metallic star. The Legislature of 1898 ordered the Geological Survey to investigate "the question of road construction in this State" and report thereon. Governor Lowndes promptly signed the bill and in this manner there was created the Survey's "Highway Division," the progenitor and immediate predecessor of the State Roads Commission established ten years later.⁶

The Geological Survey's study of roads was, from the first, closely allied with the Johns Hopkins University, then but 22 years old and housed in temporary buildings on Howard Street in Baltimore.

State Geologist Clark was professor of geology at Hopkins and superintendent of the Survey. He brought into the roads study such eminent Hopkins men as Harry Fielding Reid, St. George L. Sioussat, Edward B. Matthews, George B. Shattuck, and L. A. Bauer.⁷

Professors Clark and Reid began their work by a tour of New Jersey, Connecticut and Massachusetts, each of which had road-building programs under way. In Boston they were shown around by Arthur N. Johnson of the staff of the Board of Highway Commissioners of Massachusetts. Clark called him "one of the best trained of their younger engineers." They hired him to round out their first highway team.

Johnson moved to Maryland in June 1898 with the title of Highway Engineer and remained with the Survey seven years. He later became dean of the School of Engineering of the University of Maryland.

He at once launched upon a 2500-mile trip through every section of the State where he observed Maryland's amateurish road construction with the eye of the professional highway engineer.

⁶ Acts of 1898 (April 9, 1898).

⁷ Geological Survey, Vol. III, page 31.

ROADS MEANDER THROUGH HILL AND DALE

As previously noted, Maryland's road system evolved from the necessities of travel in the Seventeenth and Eighteenth centuries. By 1800⁸ all



This was one of the better roads at the turn of the Century. Of the 14,000 miles of roads in the State, only 225 miles were surfaced with gravel like this. Note the steep hill ahead. No effort was made by the early road builders to cut down a grade. They merely surfaced the trails of the past.

the principal roads or trails had been hacked out of the countryside and were in daily use. With a few exceptions, such as the National Road, no attempt had been made to "locate" the roads. Most of them meandered across the country, up and down hill, with no apparent regard for the topography. This resulted in excessive and unnecessary grades.

change the courses of the roads to any great extent. No town wanted to be bypassed.

Great responsibility had rested, unconsciously no doubt, on the men who cut the first roads through Maryland's terrain. Towns sprang up along these primitive paths and their inhabitants resisted any attempt to

The one great chance to relocate the roads came with the advent of the turnpikes. But the Legislature would not allow any tampering with established routes. In 1805 an Act was passed chartering several turnpike companies and setting the style for future construction. The charters specifically provided that "the roads are to be made over, and upon the beds of the present roads . . ." ⁹

Thus the original curves, hills and gullies were preserved, with remarkably little change, for the travelers and road engineers of the Twentieth Century.

Even on the flat coastal plains of Southern Maryland and the Eastern Shore Johnson found at stream crossings and elsewhere grades as steep as ten percent.

On the other hand, he noted that the National Road west of Cumberland which crosses Maryland's highest mountains "was so carefully planned that there are no grades over eight percent." ¹⁰ This road, it will be recalled, was re-built in the 1830's by West Point engineers.

⁸ *Ibid.*, page 265.

⁹ Acts of 1805, Chapter 150.

¹⁰ Geological Survey, Vol. III, pp. 192, 194.

GETTING MARYLAND OUT OF THE MUD

Much of the mud which had aroused the farmers was unnecessary, Johnson found. It was due to almost a total lack of proper road drainage. To prevent water from the road running into private lands, he noted, "storm water is frequently kept in the road-bed until some water-course is crossed."¹¹ The proper use of ditches, cross-ditches and side-drains was little understood and less practiced.

Johnson went about the State preaching grading, drainage and other fundamentals to the hundreds of county road supervisors, all untrained men who in a county such as Wicomico received wages of \$1.25 for each day they worked upon the roads (average: 50 days a year).

Strange to their ears were such statements as "the surfacing of an ungraded road simply preserves it in a bad condition. The object of a pavement is to furnish a wearing surface and a protection for the foundation from water and consequent softening. It is in reality a roof. It is the rolling which makes the roads."¹²

Johnson pointed out that the best roads did not necessarily have the thickest pavements. Most of the Maryland turnpikes were at least eighteen inches thick with the lower course of large stones ten inches or more in diameter (telford construction).

"The macadam road," he told them, "rolled to a thickness of *six inches* has been found everywhere to be all-sufficient."¹³ He carefully made the point that the thinner the surface the less money the road would cost. In fact, he showed that much of the money spent on roads in Maryland was entirely wasted.

SHOWING THE PEOPLE GOOD ROAD SAMPLES

On the theory that "seeing is believing" a one-half mile sample of modern road construction was built in the summer of 1898 between Kingsville and Fork in Baltimore county. It embodied the latest principles of highway engineering known at the time and the construction was supervised by an expert of the federal office of Road Inquiry of the Department of Agriculture, the parent organization of the present Bureau of Public Roads.

The foundation was first shaped and rolled by steam roller, then covered with a layer of two and one-half inch stone which in turn was thoroughly rolled. The second layer of stone was then spread and rolled. A

¹¹ *Ibid*, page 271.

¹² *Ibid*, pp. 201, 255, 277, 282, 284.

¹³ *Ibid*, page 286.

thin binder course was added making the total thickness of the pavement about six inches. The road was constructed 12 feet wide and the cost for the one-half mile was computed at \$2,268. The road material was trap-rock found in abundance at the roadside.

It will be noted that this construction was essentially the same as the first macadam laid in 1823 on the Boonsboro Pike and again on the National Road in 1834,¹⁴ except that in 1898 the compaction was made by road roller instead of wagon traffic.

When this model stretch was completed, Maryland had its first recorded "road opening." The leading citizens of the State were there, and addresses were delivered on the virtue of good roads.

EXHIBIT AT TIMONIUM FAIR

A year later a second model strip 100 yards long was constructed as an exhibit at Timonium Fair. Built in sections, this sample showed the different stages of construction from the properly prepared subgrade to the fully rolled surface. As reported at the time: "Many people visited the road and great interest was manifested in the latest and most approved methods which were exhibited in its construction."¹⁵

APPEALING TO THE POCKETBOOK

The Geological Survey continued its campaign of public education by hammering hard at the economic advantage of good roads. It discovered that the average cost in Maryland of hauling farm produce by wagon was 26 cents per ton per mile, against 12 cents over improved roads in northern states and 10 cents in England. From these and other figures it concluded that by building good roads Maryland would save some \$3,000,000 per year.

But how much would such a program cost? The Survey was ready by 1899 with its figures. It estimated an average cost of \$4,000 a mile for approximately 1500 miles of main roads, or \$6,000,000. In addition, it made a rough calculation of a million dollars to buy out the turnpikes, or seven million "to improve all the important roads of the state."

It admitted: "this is a large sum and the wisdom of expending it should be thoroughly discussed." It then suggested a ten-year program of \$700,000 per year, the cost to be divided equally between the State and the counties.

¹⁴ *Ante*, pp. 24, 33.

¹⁵ Geological Survey Reports, Vol. III, pp. 44, 45.

It pointed out that the people were already paying some \$600,000 a year on roads and bridges, in addition to \$140,000 in tolls on turnpikes. It recommended a state highway commission to supervise the program.¹⁶

MIXING POLITICS AND LARGE ROCKS

But the legislatures of 1900 and succeeding years were not ready for state supervision of roads.

In most counties the old methods persisted, causing the Survey to say: "and with the old result of no practical improvement, each season removing all traces of the previous season's work."¹⁷

The local county commissioners clung to their time-honored system, about which one farmer commented: "They mix politics and large rocks and have no good roads."

The Geological Survey took note of this aspect of the matter in 1903 when it said: "The elimination of political influence from the disbursement of the road money is perhaps too much of a reform to expect, but it is not too much to hope that at no distant time it will be found to be good politics to make good roads."¹⁸

LOCAL PRESSURE SPARKS ROAD REFORM

The pressure for reform came from the people. In county after county mass meetings were held by such groups as the Vansville Farmers' Club of Prince George's County, the Third District Road League of Elkton and many others.

Short stretches of sample roads were built in various parts of the State as reminders to the people of what could be done.

An example was a one-mile section in Queen Anne's County just south of the Chester River, surfaced with slag shipped by barge from Sparrows Point. The County Commissioners put up \$500 to pay for the material and the citizens furnished all the labor needed.¹⁹

THE STATE AID ROAD LAW

An important break-through for the good roads movement was the passage in 1904 of the so-called Shoemaker Act,²⁰ the first significant statute

¹⁶ *Ibid*, pp. 409, 426-28.

¹⁷ Geological Survey Reports, Vol. IV, page 97.

¹⁸ *Ibid*, Vol. V, page 145.

¹⁹ *Ibid*, Vol. V, pp. 146, 184.

²⁰ Acts of 1904, Chapter 225; Geological Survey Reports, Vol. VI (1906) page 298.



*Mr. Shoemaker
Father of first
state-aid
road law*

for state financial aid and state supervision. The act took its name from Samuel M. Shoemaker of Baltimore County who with Conway W. Sams and others has been referred to as a leader of the march to get Maryland out of the mud.

This statute appropriated \$200,000 annually from the State Treasury to build modern macadam roads in the State, provided the counties matched this money on a fifty-fifty basis. Thus a potential fund of \$400,000 a year was set up to modernize the highway system.

It was not as much as the \$700,000 the Geological Survey had said was necessary in its 1899 report; nevertheless it was a long stride in the right direction and the principle suggested was adopted: state aid up to

fifty percent and state supervision.

Under the Act the counties were to select the roads to be improved subject to approval of the Geological Survey which was the state agency named to administer the new law. Upon approval the State made surveys, drew up plans and specifications and made initial cost estimates. The County Commissioners then advertised for bids, which were publicly opened and read, and the contract awarded the lowest responsible bidder, provided the bid was not more than the State's estimate. The State was charged with supervision of the work through inspectors. Any land acquisition costs were to be assumed entirely by the counties. The money was to be apportioned to the counties on the basis of their road mileage.

Upon completion of a contract satisfactory to the State the road became a county road and the county commissioners were required to keep it in good repair, under penalty of a taxpayer's mandamus suit if they failed.

There was much opposition to the statute as radical legislation both during its stormy passage through the halls of Annapolis and afterwards. It was said to infringe on the principle of local rights and to give the State too much power. It was promptly attacked in the courts as unconstitutional on the "internal improvements" theory. The Court of Appeals sustained the law nearly a year after it was passed and it went into effect in February 1905.²¹

However, the proponents of the legislation, while glad to get half a loaf, kept pressing for greater state powers over main roads and for the creation of a state highway commission.

²¹ *Ibid*, pp. 295, 323.

DUST AND OTHER PROBLEMS OF THE INFANT AUTO

The dawn of the Auto Age was given official recognition in Maryland toward the end of 1907. The highway reports of the Geological Survey mention the automobile for the first time—with respect and some concern.

The building of the macadam roads up to that time, it was said, “was simply to design a surface fit to protect the road foundation from the destructive effects of weather, the shod feet of animals and of hard-tired wheels running at a moderate rate of speed.” It recognized the “modern, high-powered, fast-speeding, rubber-tired automobile as an inevitable condition to be henceforth considered and provided for.”

The auto was apparently here to stay. What provision, if any, should be made to receive it?

The chief objection to speeding automobiles, doing fifteen and twenty miles an hour down macadam roads, was the dust they raised. It was admitted that temporary improvement could be obtained by sprinkling the dry macadam surface with water. Properly refined oils with an asphaltum base were more permanent, however, while the use of coal-tar was still better.

“Properly built and tarred macadam may yet prove a solution for the question,” the 1907 report stated.

“BREAKERS” IN THE ROAD OR “GOVERNORS” ON CARS?

The dust nuisance of the auto, it was said, was entirely due to its speed. If it passed along the roads as slowly as horse-drawn vehicles there would be no complaint. The weight of the machine was not as great as a loaded wagon and the rubber tires were actually beneficial to the road surface.

But that speed!

The highway officials of 1907 came up with two constructive suggestions to handle the problem of auto speeding: (1) the building in the road at frequent intervals of artificial ridges or breakers extending across the road high enough “to absolutely deter the most rabid ‘scorcher’ from more than one attempt to maintain an excessive speed over a road so constructed”; and (2) “regulation of the gearing of high-powered machines so that excessive speeds are impossible.”²² This was the early governor suggested for cars.

ROADS COST \$8,000 A MILE

The Geological Survey, through its highway division, handled state road matters from 1898 to 1908 when the State Roads Commission was

²² Geological Survey Reports, Vol. VIII (1908), pp. 37-40.

created. This new agency will be described in succeeding chapters. After 1908, the Survey ran parallel to the Roads Commission for two more years, administering the Shoemaker Act and other matters.

The highway division of the Survey was abolished in 1910 and all of its duties transferred to the new commission.

In five years it had completed under the State Aid Act 125 miles of state roads at an average cost of \$8,016 per mile including bridges.²³ In addition, 20 miles had been constructed of a 30-mile road between Baltimore and Washington at a cost of about \$12,000 per mile.

PUBLIC RELATIONS CAMPAIGN

The Survey's main value to the State, however, was educational. Through studies, press releases and the building of model roads, it conducted what today would be considered an intensive campaign of public relations in the good roads field.

In turning over its powers, duties and property to the Roads Commission in 1910 Professor Clark, who for twelve years had been the spark plug of the Survey, made this closing remark: "It also acquires the other assets of the Highway Division, not the least of which is the sure appreciation by the public of the good roads movement."²⁴

²³ *Ibid.*, Vol. IX (1910), pp. 89, 99.

²⁴ *Ibid.*, Vol. IX (1910) pp. 82, 94.



The dust nuisance of the new auto gave the 1908 State Roads Commission one of its first headaches. Motorists solved the problem by covering themselves in garb which came to be known as "dusters."

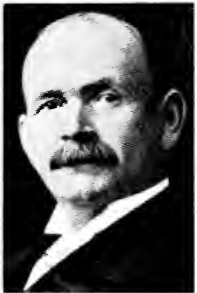
Part II

THE FIRST TWENTY YEARS OF THE STATE ROADS COMMISSION (1908 — 1928)

Chapter V

THE FIRST STATE ROADS SYSTEM

Governor Austin L. Crothers, who has been called the father of the state roads system, came into office in 1908 on a good roads platform.



Gov. Crothers

He steered through the Legislature a bill providing for the building of such a state-wide network in seven years and lubricated this legal machinery with a whopping \$5 million appropriation.¹

To administer this program the Legislature established the State Roads Commission.

The Commission was to use its judgment in selecting the system, which in general was to run through all the counties of the State and connect all the county seats with Baltimore.

The plan involved no new construction on new locations. Existing roads of the past were to be chosen and brought up to modern standards: that is, hard-surfaced.

The new Commission began its seven-year assignment with the vigor of youth and accomplished its mission on schedule. However, the cost ran nearly double the original appropriation.

By the end of 1915 there had been constructed and accepted 875 miles of all-weather roads on the main system at a cost of \$9,817,000 or \$11,225 a mile.

¹ Acts of 1908, Chapter 141.

THIRTEEN HUNDRED MILES

Some 190 miles of privately-owned turnpikes had been purchased, and in some cases improved. In addition, it had completed the Washington Boulevard begun by the Geological Survey, had constructed a new Baltimore-Annapolis road, and had absorbed into the new system many miles of State-aid road built both before and after the Commission was created.²

The completion of the program therefore gave Maryland about 1,300 miles of interconnecting highways which penetrated into every corner of the State. It not only connected the county seats, but it joined many of them with isolated but important points, such as the road from Princess Anne to Crisfield.

The 1915 report of the Roads Commission pointed out that it was now possible to ride from one end of the State to the other "over trunk lines,"³ mentioning the 405-mile direct run from Oakland to Ocean City by way of Cumberland, Hagerstown, Frederick, Baltimore, Elkton, Chestertown, Denton and Salisbury. By use of the Bay Bridge this distance has now been cut to about 310 miles.

The state roads system as originally laid out touched neighboring states at but few points. The system was strictly intra-state, to connect the counties with each other.

Thus the York road was improved as far as Parkton, but not to the Mason-Dixon Line; and present U. S. 13 and U. S. 113 stopped dead at Pocomoke, four miles north of Virginia.

Of course, the dirt roads of an earlier era were still there, but hardly anyone used them. Interstate travel, as well as the great majority of transportation inside the State, was by railroad.

EARLY ROAD METAL

The type of roads built was of the greatest variety, but generally constructed of material found in the locality.⁴ There was sand clay construction, broken stone macadam, gravel macadam, shell macadam, pitched macadam, brick, stone block and sheet asphalt pavements, the latter materials being used in and near the metropolitan centers. Experimental work was undertaken on inferior local materials by mixing them with cement and bitumens with satisfactory results.

² SRC 1908-12, pp. 12, 17, 79; SRC 1912-15, pp. 29, 116; SRC 1927-30, p. 18.

NOTE: The "SRC" references given here and subsequently are to the bound volumes of the reports of the Roads Commission on file in the office of the Commission Secretary. They have been published every four years, every three years and in recent years biennially.

³ SRC 1912-15, page 16.

⁴ SRC 1908-12, pp. 52, 57.

The dust menace of the automobile, so lamented by the Geological Survey, continued to plague the new Commission. Discussing the dust problems on dry stone roads it said in one of its early reports, "It apparently has never been suggested that a remedy for this state of affairs is the abolition of the motor vehicle. On the contrary, their increase in numbers and their development for all sorts of purposes seems to be inevitable and probably fortunate."

So the Commission engineers adopted the policy of oiling the dry stone roads soon after construction and building surfaces with bitumens or pitches. Of the latter material the Commission by 1911 had adopted a rule-of-thumb: where the average daily traffic was less than 20 motor cars, the dust problem was insignificant; where the daily traffic exceeded 20, the road should be treated with bitumen either during or immediately after construction.⁵

FIRST CONCRETE PAVING

Concrete paving was first introduced into the state roads system in 1912, in the middle of the "seven-year-program," although its use for other building purposes such as bridges and even city streets was well-known. The first use of Portland cement concrete for rural roads in the United States was in 1909 in Wayne County, Michigan, now a part of the city of Detroit.⁶



To combat the dust problem of the speeding auto on dry stone roads, the first Commission experimented with numerous oiling devices. This scene shows early application of coal tar and crude oil.

After a personal inspection of the Michigan experiment in 1912, the Roads Commission laid five experimental sections of concrete that summer, totalling in length three miles. Three sections were on the Washington Boulevard at Bladensburg, Paint Branch and Laurel, while the others were in Charles and Cecil counties.⁷ The sections were subjected to heavy

traffic, they stood up well, and the cost of maintenance was found negligible.

⁵ SRC 1908-12, page 105.

⁶ Highway Engineering, Ronald Press (1951) page 601.

⁷ SRC 1912-15, page 48.

The use of concrete was extended until by the completion of the program in 1915 a total of 190 miles had been laid at a minimum price of 90 cents per square yard.



The first concrete paving was laid in Maryland in the summer of 1912. Here a hay wagon and a couple of flag-bedecked early cars try out the new surface.

This material was found cheaper than macadam on the Eastern Shore, where stone had to be transported long distances, and many miles of it were laid there. A 14-foot concrete road was built in 1914 and 1915 from Salisbury to near Ocean City, the longest stretch in the State. Most of this early Maryland concrete is still in place, although long since covered with one or more bituminous coatings.

THE FIRST ROADS COMMISSIONERS

The members of the Roads Commission are appointed by the Governor and serve at his pleasure without Senate confirmation.

This arrangement was established by the General Assembly of 1908 and has been sanctioned by successive legislatures. The governmental theory is that, since roads are so close to the people, road commissioners should be immediately answerable to an executive who in turn is responsible to the people.



Mr. Tucker

The first commission was set up with a five-man membership, and Governor Crothers proceeded to make his appointments at once.

His choice of chairman was John M. Tucker, a fellow Cecil countian. Known as "Crothers' right-hand man" and with no experience in road matters, finance or administration, Tucker at forty years of age plunged into his new duties with great determination. He gave up his private interests and put full time, and indeed overtime, in this \$2,500 a year post. He was at his office day and night, and when not behind his desk was all over the State inspecting road construction.

The law provided for two other salaried members, at \$2,000 each, and two non-salaried members. For the first two the Governor named Francis C. Hutton, a graduate civil engineer and Montgomery County farmer,

and Samuel M. Shoemaker, the Baltimore County farmer who for years had been a militant good roads enthusiast. Shoemaker maintained a lifelong interest in civic affairs, and at his death in 1933 was chairman of the Board of Regents of the University of Maryland.



Dr. Remsen

The non-paid members were from the Geological Survey: State Geologist Clark and Dr. Ira Remsen, president of the Johns Hopkins University.

This quintet was sworn in by the Governor on the morning of April 30, 1908 at the old Rennert Hotel, then a leading hostelry situated at Saratoga and Cathedral streets. They set up executive offices in the Union Trust Building at Charles and Fayette streets, and engineering offices at the old Geological Survey headquarters in the Johns Hopkins University buildings at 522 North Howard street.

EXPERIENCED MAN FOR CHIEF ENGINEER

For their first Chief Engineer they chose Walter W. Crosby, who also was chief engineer of the Survey. Crosby was a trained highway engineer who had come to Maryland in 1901 from the Massachusetts Highway Commission. He was brought here by Shoemaker to be the first Highway Engineer of Baltimore County, which was the first sub-division in the State to establish such an office. He transferred to the Survey in 1904.

The Commission had the benefit of Crosby's trained staff, the background of the Survey's studies, and the excellent work done by the testing laboratory. For a new agency, it got off to a smooth and auspicious start.

ROADS SYSTEM PLANNED ON TOWN MEETING PRINCIPLE

Its first task was to select a roads system that would carry out the mandate of the statute. In a forthright, democratic manner it decided to go to the people and find out what roads they wanted. So it set up a series of hearings in all sections of the State to sound out public opinion, on the time-honored town meeting principle. Such a gathering, arranged by Chairman Tucker, was held in Frederick in June, 1908, and was typical of others.

The Chairman rounded up three automobiles, a majority of his commissioners, the chief engineer, the new secretary of the Commission, J. C. Bowerman, and Governor Crothers, who under the law was an *ex-officio* member of the Commission.

This caravan motored to the Courthouse at Frederick, and was greeted by an overflow crowd composed of farmers, townsfolk and members of

the Good Roads League of Frederick, Carroll, Howard and Montgomery counties.

Governor Crothers opened proceedings with a little speech explaining the objectives of the law, and closing with these words: "The spirit of the law is to do the greatest good for the greatest number of persons. There are difficulties to be overcome at every turn, and we want the assistance and support of you people to help us over the rough places."⁸

Then they asked for suggestions as to where the new roads should go. Nearly everyone who spoke had a different road in mind, and usually it was the one that ran past his house. Frederick County had 1,151 miles of roads at that time, the largest road mileage in the State.⁹

When the commissioners left town, their three motor cars sputtering over old Jug Bridge, they carried suggestions for stone roads which, if adopted, would have used up their entire mileage for the State, and exhausted the whole appropriation of \$5 million. And so it went all over the State.

Back in Baltimore, the Roads Commission held further hearings in an effort to cut down the suggested mileage to a realistic figure. By April 1, 1909, they had finally selected a state road system of about 1,300 miles, and on that day announced it to the public.

In June they let their first contract, a one-mile section from Federalsburg to the Dorchester line. By the end of the year they had 111 miles started, and by the end of their term in 1911 they had completed 168 miles, with an additional 176 miles under construction.¹¹

NINE THOUSAND A MILE THOUGHT TOO HIGH

The first Commissioners let contracts to low bidders on 80 sections of state roads totalling 258 miles. However, on 32 sections totalling 90 miles they made other arrangements for the construction because they thought the prices they were getting from contractors were too high.

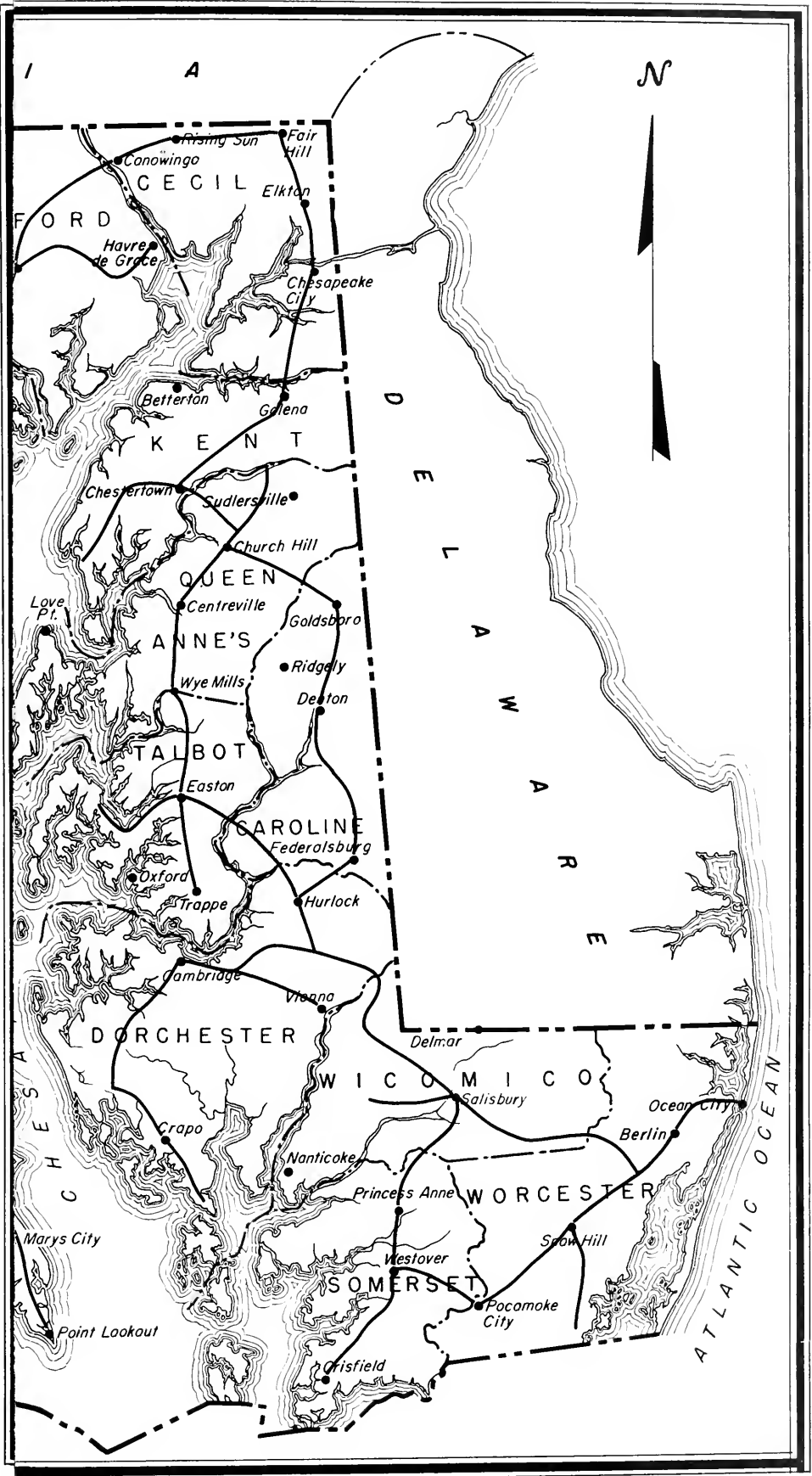
In Washington County they arranged with interested private citizens to perform the work. In other counties they farmed out the work to County Commissioners. In eight counties they hired and organized their own forces while in three counties individual commissioners undertook the task.

For instance, in Cecil, Chairman Tucker was authorized to build six miles of road according to his own ideas. He employed superintendents,

⁸ Baltimore *Sun*, June 6, 1908.

⁹ Geological Survey Reports, Vol. IV, page 296.

¹⁰ SRC 1908-12, pp. 14, 15, 19.



N

CECIL

KENT

QUEEN ANNE'S

TALBOT

DORCHESTER

WICOMICO

WORCESTER

SOMERSET

ATLANTIC OCEAN

FORD

CHESAPEAKE

DELAWARE

Rising Sun

Fair Hill

Canowingo

Elkton

Havre de Grace

Chesapeake City

Betterton

Galena

Chesertown

Sudlersville

Church Hill

Centreville

Goldsboro

Love Pt.

Ridgely

Deaton

Wye Mills

Easton

CAROLINE
Federalsburg

Oxford

Trappe

Hurlock

Cambridge

Vienna

Delmar

Salisbury

Ocean City

Berlin

Marys City

Nanticoke

Princess Anne

Snow Hill

Westover

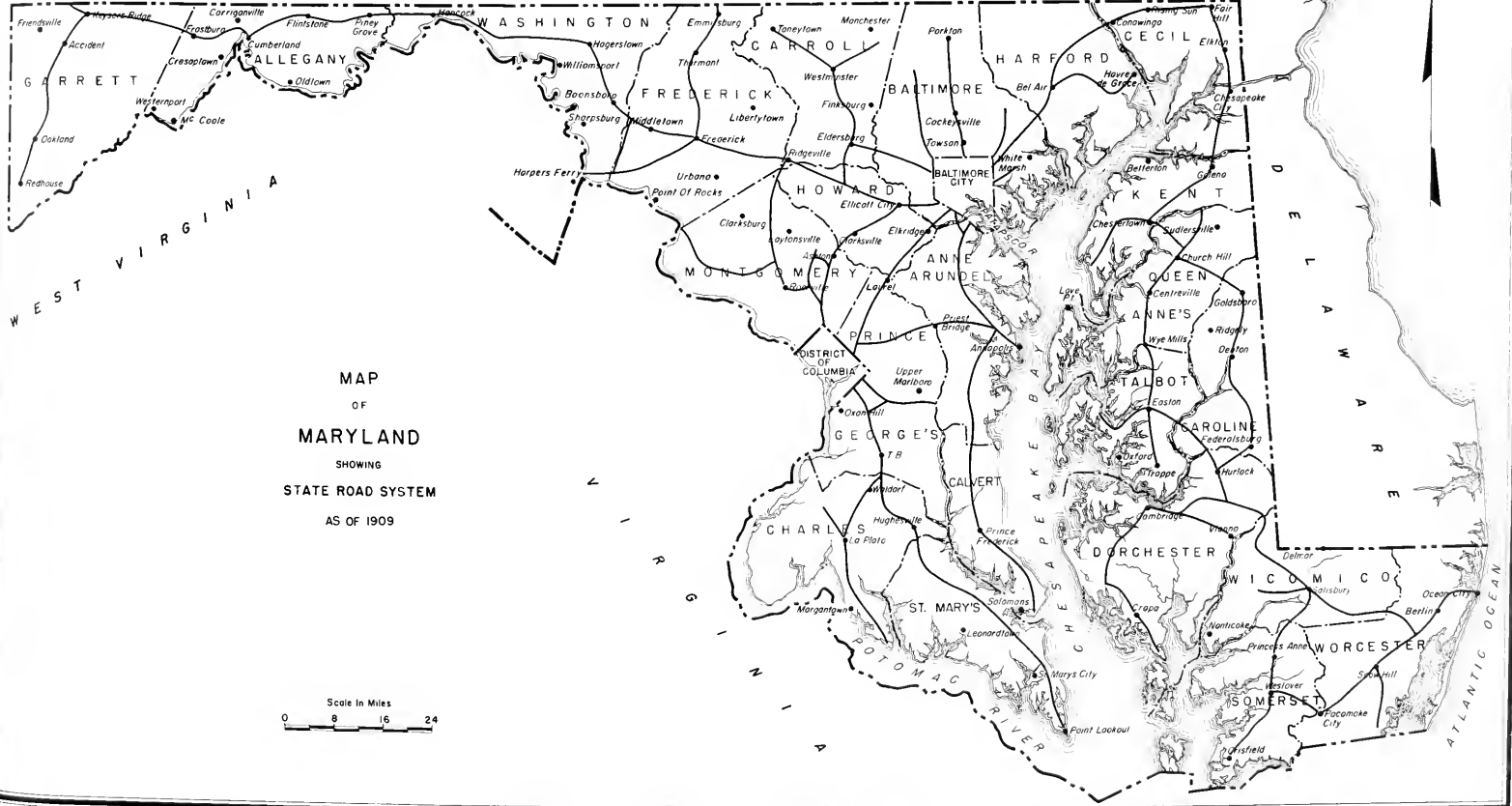
Pocamoke City

Point Lookout

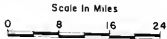
Crisfield

P E N N S Y L V A N I A

N



MAP
OF
MARYLAND
SHOWING
STATE ROAD SYSTEM
AS OF 1909



ATLANTIC OCEAN

WEST VIRGINIA

GARRETT

ALLEGANY

WASHINGTON

CARROLL

BALTIMORE

HARFORD

CECIL

FREDERICK

HOWARD

BALTIMORE CITY

KENT

MONTGOMERY

ANNE ARUNDEL

PRINCE GEORGES

QUEEN ANNE'S

DORCHESTER

DISTRICT OF COLUMBIA

ST. MARY'S

CALVERT

CHARLES

WICOMICO

CHARLES

ST. MARY'S

CALVERT

CHARLES

WICOMICO

CHARLES

ST. MARY'S

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CHARLES

WICOMICO

CHARLES

ST. MARY'S

CALVERT

CHARLES

WICOMICO

labor, teams and bought the materials. Although without experience, he personally supervised the performance of the road-building.

This departure from the bid system had been authorized by the Legislature.¹¹ It was a frank experiment to find the best and cheapest method to rebuild Maryland's road system.

LOW BID SYSTEM FOUND BEST

The results were not satisfactory. In his 1911 report, Chief Engineer Crosby gave the figures: work done by contract under the low bid system, \$9,650 per mile; work done by counties and by the Commission's own forces, \$12,026 or 25 percent higher; work performed by individual commissioners, \$14,218 or 47 percent higher.

Crosby was critical of Chairman Tucker's performance in Cecil: "It was said that the character of the results secured was not as good as that usually had from contract work. The excessively high cost of this work was undoubtedly due to inefficient management of the work."¹²

Disagreements between the Chief Engineer and the Chairman resulted in a rift in the Commission itself, where a definite division was noted between the "scientific men" (Remsen and Clark) and the "practical men" (Tucker and Hutton), with Sam Shoemaker in the middle. In this embarrassing situation, Governor Crothers sided openly with the Chairman without, however, exercising his right to remove any of the others. He frequently appeared at Commission meetings and, as *ex officio* member, cast his vote to back up his Chairman.

At mid-term in 1910 an Act was passed increasing the membership of the Commission from five to seven. The Governor did not immediately use this new power, however, but held it as a sort of threat to the men of science. In some important matters, such as the purchase of the turnpike from Baltimore to Boonsboro, the Commission divided evenly (Crothers, Tucker and Hutton versus Remsen, Clark and Shoemaker), and no action at all was taken.¹³ Finally, in the closing year of his administration, the Governor took control by appointing one additional member, a political associate named Charles B. Lloyd.

THE WELLER ADMINISTRATION

In 1912, Phillips Lee Goldsborough, of Dorchester, moved into the Executive Mansion. As his chairman of the Roads Commission he ap-

¹¹ Acts of 1908, Chapter 141, Section 32-D.

¹² SRC 1908-12, pp. 117, 118, 139-143.

¹³ Baltimore *Sun*, October 18, 1910.

pointed Ovington E. Weller, of Arlington, then Baltimore County, to finish the Seven-Year Program.

Weller was a man of many facets. Born in Reisterstown, he was graduated from the United States Naval Academy with the class of 1881.



Mr. Weller

He studied law at the National Law University in Washington, and for some years was associated with the Boston investment firm of Hornblower and Weeks. He later became a United States Senator from Maryland.

He was a man of some means and was able to devote full time and more to the low-paid post at the Roads Commission. He did a top-notch job, reorganizing it from top to bottom, and setting a pattern that successive commissions have found generally useful.

The Governor at first kept the two "scientific men," Remsen and Clark, but appointed three others to assure Weller a working majority. They were Walter B. Miller, a Salisbury business man, Andrew Ramsey of Mount Savage, Allegany County, and E. E. Goslin, a former State Senator from Caroline County who had been Secretary of the Commission since 1910, succeeding Bowerman who had resigned. To succeed Goslin as secretary, the Commission appointed William L. Marcy, postmaster of Annapolis and a Goldsborough lieutenant in Anne Arundel County.

Two years later, in 1914, three new faces appeared on the Commission. Dr. Remsen, who had just retired as president of Johns Hopkins, asked to be relieved of his Roads Commission duties. So did William Bullock Clark. These two men, both dedicated scholars, had served their State in the good roads movement without compensation since 1898.

The Legislature then voted salaries for these posts. In the meantime Senator Goslin had died. For the three vacancies the Governor appointed Thomas Parran, of Calvert County, J. Frank Smith, of St. Mary's County, and John M. Perry, of Queen Anne's County.

But regardless of the subordinate memberships, the Commission was run throughout the four years by "Old Man Weller," as he was affectionately known throughout the State.

One of Weller's first acts as Chairman of the Roads Commission in 1912 was to create a new position of "assistant chairman," an office designed to handle the administrative details of the Commission and leave the Chairman free for policy matters. To this post the Commission named Frank H. Zouck, a native of Baltimore County, president of the Reisterstown Savings Bank.

SHIRLEY IS NEW CHIEF ENGINEER

To round out the first team in 1912, the Commission appointed Henry G. Shirley to be chief engineer in place of Walter W. Crosby, who had resigned. Shirley had succeeded Crosby once before, in 1904, when Crosby left the position of Roads Engineer of Baltimore County to become Chief Engineer of the old Geological Survey.



Mr. Shirley

The Weller administration assured its own success and the prompt fulfillment of the Seven Year Program the day it appointed Henry Shirley. For he became one of America's finest highway engineers. To him goes much of the credit for Maryland's high rank as a good roads state before World War I. As the *Baltimore Sun* said: "He finished a primary road system ahead of any state."¹⁴

Native of West Virginia, a graduate of the Virginia Military Institute, Shirley moved from his Baltimore County roads post to the State Roads Commission at the age of 38. He came to build a road system, and when he finished his assignment he went on to other fields. He left Maryland in 1918 to become Secretary of the Federal Highway Council during the War, and was a member of the Committee of Highway Transport of the Council of National Defense.

SHIRLEY HIGHWAY NAMED FOR HIM

In 1922 Shirley was appointed Chairman of the Virginia Highway Commission at a salary of \$12,500 a year, then one of the highest in the country. He was reappointed by successive Virginia governors, and held this position until his death in 1941. He was charter member and first president of the American Association of State Highway Officials, and also served as president of the American Road Builders Association.¹⁵

"Shirley Highway" in Virginia—officially the Henry G. Shirley Memorial Highway—was named for this former chief engineer of the Maryland Roads Commission. Known on the maps as Route 350, it runs south from Washington and is one of the Old Dominion's finest freeways.

THE DISTRICT MEN RIDE MOTORCYCLES

One of Shirley's first acts for the 1912 Roads Commission was a reorganization of the Engineering Department and the establishment of the

¹⁴ *Baltimore Sun*, Library sketches.

¹⁵ Archives, Virginia Department of Highways, Richmond, Va.

"District Engineers" system. The first Commission had one engineer for construction and another for maintenance, with separate staffs working out of Baltimore headquarters. Shirley consolidated these positions and divided the State into eight geographical sections, each in charge of a resident engineer who was responsible for all construction and maintenance therein.

Each district engineer was equipped with a motorcycle and it was a common sight to see these men, wearing goggles and leggings, dashing about the Maryland countryside inspecting the work in their districts. The system started by Shirley survives in principle today.

Among the early district or resident engineers appointed by Shirley were William F. Childs, Jr., who later became Chief Engineer and retired in 1955, and Austin F. Shure, who after 49 years retired in 1958 from the position of Assistant to the Chief Engineer.

The new system reduced travel expenses, railroad fares and inspection trips and was claimed to have "saved the State thousands of dollars yearly in expenses and in increased effectiveness."¹⁶ Regular meetings of these district men were called several times a year in Baltimore for conference with the top echelon at headquarters and for the comparison of problems and procedures. A similar system is in effect today.

OFFICES MOVED TO GARRETT BUILDING

The new Commission made a complete inventory of all machinery and tools and opened an equipment ledger with one person in charge of all physical property. It organized a Purchasing Department requiring written requisitions for all items bought, a system which the Commission reported "saved the State \$59,500 in three years and four months."

It installed a new accounting system set up by the outside accounting firm of Haskins and Sells, requiring monthly statements. It provided for appointments and promotions on a strictly merit basis, thus anticipating by some years the State Merit System.

In 1913 the Commission moved its offices and also its engineering department to the Garrett Building in Baltimore, occupying the entire sixth floor. The testing laboratory was set up in specially-designed quarters in the basement. Thus for the first time all of the Baltimore operations of the Commission were under one roof.

The financing of the road construction under the Seven Year Program and for other projects was entirely by biennial bond issues authorized by successive legislatures. Through 1914 the amount authorized was

¹⁶ SRC 1912-15, page 9.

\$15,770,000, the sale of which netted the Commission \$15,376,524 for an average rate of 97.5049 percent.¹⁷

PRE-AWARD OF CONTRACTS SAVES QUARTER MILLION

The 1914 appropriation of \$6,600,000 was not made until April 16, late in the season to organize a construction program. So the Commission took the unusual step of "pre-awarding" the contracts. During the winter of 1913-14 it advertised for bids and awarded some 80 contracts, subject to sufficient money being provided by the Legislature to cover them.

When the money was appropriated, the Commission was ready with its notices to proceed and the contractors lost no time in going to work.

This practice reaped the benefit of low bids and sharp competition from many contractors unemployed during the winter. It also resulted in bidding by many out-of-state contractors, furthering competition. The Commission claimed a saving of from \$250,000 to \$500,000 "over what this work would have cost if it had not been advertised until after April 16, as was the case in 1912."¹⁸

PROGRAM COMPLETED ON SCHEDULE

With this head-start 1914 became the Commission's finest year. By year's end it had completed 225 miles of hard-surface roads and had under construction 204 more.

The year 1915 was the deadline for completion of the seven-year assignment begun in 1908. Because of the large amount of work done in 1914 and previous years, this target date was relatively easy to reach. The commissioners built 187 miles in 1915 and by November were able to announce that the state roads system was "about completed."¹⁹



Example of early road construction under the "seven-year program" of 1908. Ox carts and flivvers share the improvements on an equal basis.

PRICES UP SINCE 1908

The 1908 Legislature had hoped the job could be done for \$5,000,000, the amount of its initial ap-

¹⁷ *Ibid*, page 17.

¹⁸ *Ibid*, page 12.

¹⁹ *Ibid*, page 16.

propriation. But it actually cost nearly twice that amount—and the Legislature made appropriations as needed.

During the period costs rose sharply, not only for labor but for stone and the freight charges to ship it. In 1913 Governor Goldsborough reported that road construction costs were up 20 to 40 percent over 1908 prices.

The \$11,000 a mile cost of the first state road system was considered by many legislators a pretty high price to pay for good roads.

Chapter VI

MEETING THE PROBLEMS OF WORLD WAR I

After the frantic spurt of the previous seven years, the period 1916-1920 was one of relative inactivity.

Although the Legislature appropriated \$5,700,000 "to fill in all the gaps in the secondary system," and for other purposes, only \$2,816,780 was spent and only 191 miles constructed¹—not as much as in the one year of 1914.



The designers of the first state road system had not anticipated the heavy army equipment of World War I. The pavements were not wide enough or thick enough to stand up under this kind of traffic.

A new commission was inducted in the Spring of 1916. In 1917 and 1918 the War was on, and by 1919 prices had skyrocketed.

Construction which cost \$12,833 per mile in 1916 and 1917 had reached the staggering figure of \$20,468 in 1919. So the Commission built the roads that were considered of first priority and let the rest ride unimproved into the Twenties.

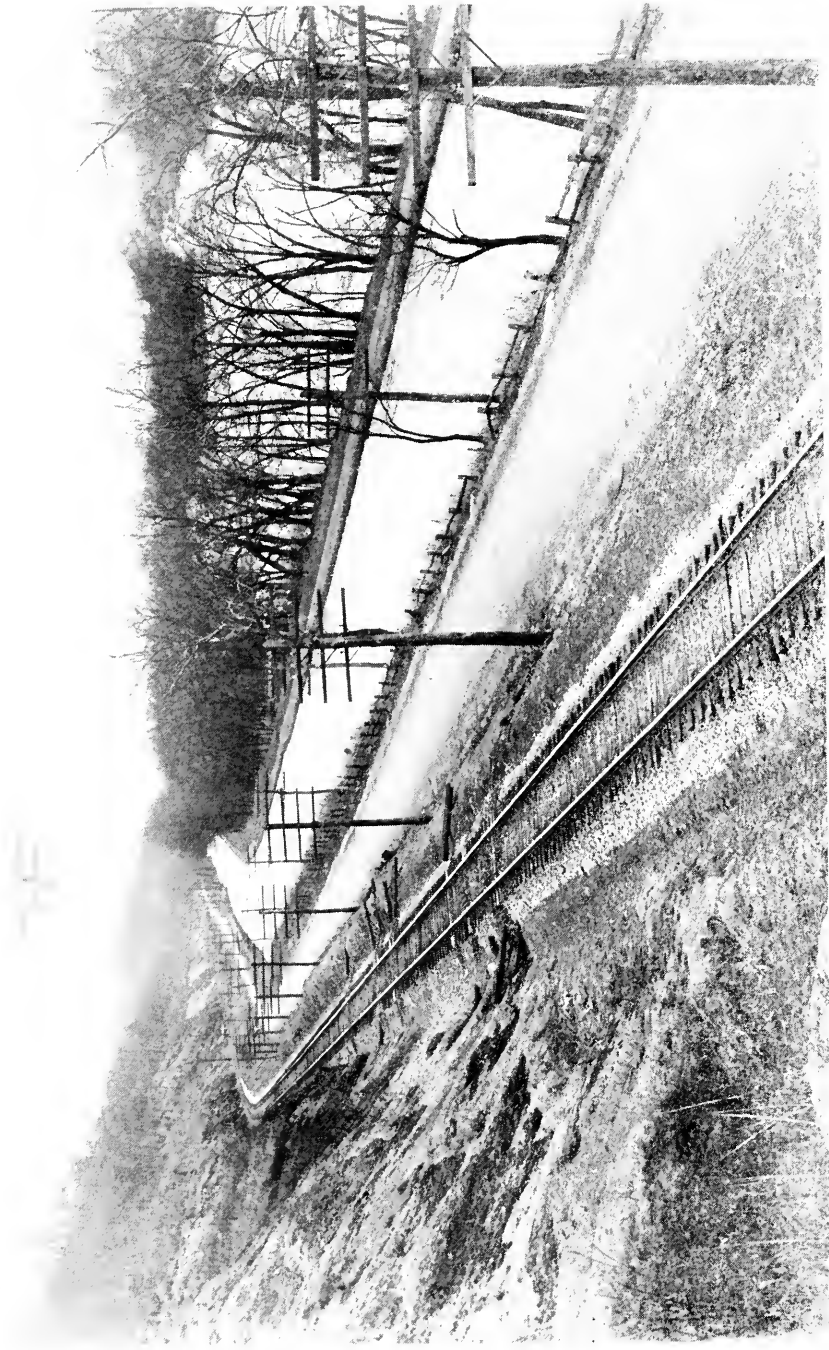
NEW COMMISSIONERS

A new administration was back in Annapolis by 1916, and the Legislature reduced the membership of the Roads Commission from seven to three.

Governor Harrington promoted Frank H. Zouck to the chairmanship and appointed as his associates G. Clinton Uhl of Allegany County and John F. Mudd of Charles County.

The Commission selected as assistant chairman John E. George of Sudlersville, who had been Maryland's first Automobile Commissioner. Clyde

¹ SRC 1916-20, pp. 5, 14.



This photo taken after World War I shows a new state road, narrow but hard-surfaced and smooth, wedged between the Western Maryland Railway tracks and the Chesapeake and Ohio Canal. The biplane indicates a new method of transportation in addition to the three below. The picture was taken in Washington County, near Hancock.

H. Wilson of Hagerstown was elected Secretary. These men served out the four years.

MACKALL NOW CHIEF ENGINEER



Mr. Zouck

Henry G. Shirley remained as Chief Engineer until his resignation in 1918 when his place was taken by a young engineer from the University of Maryland, named John N. Mackall, a native of Calvert County who had spent all his adult life in state road work. Mackall had joined the staff of the old Geological Survey in 1905, and had transferred to the Roads Commission in 1908, where he served as Engineer of Surveys and in other capacities. For about two years before his appointment as Chief Engineer, he had left state service and was connected with the Pennsylvania Highway Department.

Mackall had a thorough knowledge of the Maryland road system and of the Marylanders it served. He brought force, enthusiasm and imagination to his post.

THE COUNTRY'S FIRST CONCRETE SHOULDERS

During his first summer as Chief Engineer, he developed another "Maryland first"—the use of the concrete shoulder. This inexpensive and ingenious device enabled the early road commissions both to widen and improve road surfaces, and to better serve heavy wartime traffic. It was widely copied elsewhere and became known as the "Maryland plan"; although in highway terminology the roadway shoulder is and was then the area of the roadbed immediately adjacent to the traveled way.



Mr. Mackall

The Maryland shoulder was a concrete strip two to three feet wide laid along each side of an old macadam road. It was built to such a height above the edge of the pavement that road metal, generally a bituminous-type backfill, could be added on the sides of the macadam.

Shoulders were first laid in Maryland in 1918 on the Bel Air Road and on the Baltimore-Washington Boulevard. As in the case of so many other improvements, necessity was the mother of invention. Some way had to be found both to widen and strengthen the roads to accommodate the huge Army vehicles that were rushing back and forth through the State. The Washington Boulevard took the worst beating because of its proximity to a new Army camp called Fort Meade. So an 18-mile stretch of

this highway was rebuilt with shoulders in 1918, increasing the width to 20 feet.

Concrete shoulders had many advantages. They were easily and quickly built. They could be constructed one side at a time so that traffic was maintained thus avoiding detours so common in those days. The backfill at the road edge added much-needed strength where the surface was weakest and failures most frequent. They reduced the crown and thus promoted safety of travel.²

USE OF SHEET ASPHALT

Another road improvement tried by the Commission in 1918 and 1919 was the use of sheet asphalt on heavily-traveled roads outside of Baltimore. This material was first applied on old Philadelphia Road (State Route 7) and placed in the proportion of one inch of binder to one and a half inches of top on an old macadam base.³

Sheet asphalt was also used during the period as a surfacing for early concrete roads pounded by traffic to the point of failure. This type sur-



The Roads Commission met the problem by rebuilding and widening the roads with concrete shoulders. Here are typical construction scenes during and after World War I.

² *Concrete Highway Magazine*, Vol. VI, No. 8, page 174 (August, 1922) Article by Harry D. Williar; SRC 1916-20, pp. 34, 39.

³ SRC 1916-20, page 41.



Concrete shoulders not only widened the roadway but allowed for strengthening the surface. The space between the raised shoulder and the center or crown of the road will be filled with road material.

facing was found by the engineers to be generally satisfactory as a road covering and economical to maintain.

YEARS OF THE LOCUST

The years of World War I were years of the locust for Maryland roads. Truck traffic was everywhere replacing wagons, bringing to roadbeds a weight problem unforeseen by the earlier road-builders.

The State was dotted with factories making the tools of war, and with military camps and installations. Each produced its quota of new and heavy traffic. War restrictions prevented new construction of roads and shortages of labor and materials hampered adequate maintenance.

The road system just completed in 1915 was in many places severely damaged by 1919.



FORERUNNER OF THE PRESENT PICNIC AREA PROGRAM. In the Twenties the Roads Commission provided a few roadside "camp-sites," the first in the East. Notice the isinglass side curtains on the car in foreground which were standard equipment. The tents were popular items and often were war-surplus material bought at the many "Army and Navy" stores of the day. This picture was taken near Frederick in the summer of 1926.

Chapter VII

MARYLAND ROADS IN THE ROARING TWENTIES

In 1920 Albert C. Ritchie became Governor of Maryland and remained in that office for fifteen years.

By this time the primary road system had been built, and much of it rebuilt. In many quarters, Maryland was regarded as the "best-roaded state in the nation" and her policies and practices were freely copied elsewhere.

The emphasis now was to be on improving safety and comfort on the main roads while building up the secondary system of the State, the farm-to-market network of feeder highways.

For his chairman of the Roads Commission the Governor selected John N. Mackall, the career-man who had been made chief engineer just two years before. Omar D. Crothers of Cecil County, a nephew of Governor Crothers, was named an associate member. He had been a state senator for two terms, and upon his resignation from the Roads Commission in 1925 moved over to the State Industrial Accident Commission. He was succeeded by R. Bennett Darnall, an Anne Arundel County lawyer.

For the minority membership the Governor appointed D. Charles Winebrenner of Frederick. Upon Winebrenner's resignation in 1924, the minority post went to William W. Brown, publisher of the *Daily News*, of Cumberland.

The nine years of the Mackall administration were the boom years for Maryland and America—the Boom that preceded the Bust.

THE BOOM YEARS

It was the Roaring Twenties, the time of the hip-flask, the coon-skin coat and the Charleston; the period of Teapot Dome, calm Calvin Coolidge and Al Smith's brown derby; the era of unlimited expansion, low income taxes and the dizzy spiral of an always rising stock market.

It also was the day of the flivver, that remarkable automotive contraption which in 1925 Henry Ford built to sell for \$500, complete with side-

curtains. The country took to the roads like children let out from school. In Maryland, for instance, the number of motor vehicles increased from 103,000 in 1920 to 320,000 in 1929.

Maryland was ready for the resultant growth in motor car traffic—as ready as she ever had been—or would be again for many a year. In 1920 there were some 2,000 miles of hard-surfaced roads in the State. Much of this mileage had been widened by concrete shoulders.

In its 1923 report the Commission said: “Maryland’s road system is undoubtedly the best in the Union but widening has improved it in many places.”¹

It was now time, the Commission felt, to give the motorist that little extra fillip of comfort and safety. The pioneer days of sheer road-buildup were over; the time was ripe for a few refinements.

SIGNPOSTS AND THE FLASHING LIGHTHOUSE

Directional and distance signs were erected along the entire road system. Every cross road was earmarked with wooden signs, 20 by 30 inches, giving the name of the road and the distance to each nearby town or hamlet.² Many of these signs are still in service, and have become landmarks of the Maryland countryside.

At the edge of each center of population was erected a 10 by 10-foot map showing the routes through the town. Mackall said: “It’s harder to get lost in Maryland than to find your way through any other state.”³

At the state lines where some states say merely “WELCOME,” the Commission erected 15 by 25-foot sign boards, on which were summaries of the State’s motor vehicle code.

Other large signs were built on mountain tops instructing inexperienced drivers how to go down hill. Among such words of advice the signs offered this one: “Descend in second gear with ignition cut off.” One motorist complained he followed this instruction and blew out his muffler, which cost him \$9.54.⁴

Although the law prohibited commercial advertising within the right of way, the Commission had the 1922 Legislature make an exception for the “flashing lighthouse,” a familiar object on the highways for many years. At curves and other spots a round ball constantly flashed the danger signal while the post which supported it advertised commercial products.

¹ SRC 1920-23, page 14.

² *Ibid.*, page 16.

³ *Concrete Highway Magazine*, Vol. VI, No. 5 (1922), page 103.

⁴ *Baltimore Sun*, November 13, 1922.



Typical flashing lighthouse on Maryland roads in the Twenties. It flashed the danger signal at the top of a hill. This one advertised golf balls.

The Commission report for 1923 said: "These are maintained without expense to the State Roads Commission by the advertising space carried on them. They are proving eminently satisfactory and it is hoped to continue this or similar marking."⁵

The Commission also instituted white lines down the center of roads, the banking of curves, and was the first highway department to commence snow removal. In 1922 Mackall said: "The Maryland system of roads is second to none in the Union and it is kept in perfect maintenance."⁶

The new Commission of 1920 abolished the position of assistant chairman created in 1912. For assistant chief engineer it selected Harry D. Williar, Jr., a University of Maryland engineering graduate who had been with the Commission since 1908 except for the War years when he was a member of the Engineering Department of Baltimore City.

The new Secretary was Lamar H. Steuart who had joined the staff in 1908 and left to work in a war plant in 1917. Steuart remained as Secretary for 29 years.

TWO JOBS

Occupying the combined posts of Chairman and Chief Engineer was John Mackall, causing the *Baltimore Sun* to say: "He holds a unique position among state officials."

Mackall early advocated removing all maximum speed limits in the State and enacting minimum limits instead. "The slow driver is the real cause of trouble on the road," he said.

He took his campaign to the Legislature that year and the maximum limit in rural areas was increased from 35 to 40.

He devised a plan to buy the Susquehanna Bridge from private toll operators and make it an ultimately free crossing.

⁵ SRC 1920-23, page 16.

⁶ *Baltimore Sun*, January 22, 1922.

The Commission instituted truck weighing patrols to protect the new highways from overweight trucks, and set up the first "camp sites" in the East, roadside retreats which were the forerunner of the picnic area program of today.⁷

THE GASOLINE TAX

Probably the most important innovation insofar as the Roads Commission was concerned was the adoption during Governor Ritchie's administration of the gasoline tax law of 1922.

Before that year all road financing had been by successive bond issues and thus was a charge against all taxpayers generally. The gas tax shifted the burden to the motorist on the theory that he who uses the highways should pay for them.

The first tax of one cent a gallon was raised to two cents in 1924. Three years later the tax was doubled and a half cent was earmarked to finance the grade-crossing elimination program of 1927. The tax became five cents in 1947 and in 1953 six cents, its present level.

With the federal government's three cent tax, motorists in Maryland in 1958 pay nine cents tax on each gallon of gasoline bought in the State for use on public roads.

The gas tax has been the solid bulwark of road financing for 35 years. It is collected for the State through the gasoline service stations and other retail outlets and has been found generally satisfactory.

CRAIN HIGHWAY

During the Ritchie administration the Roads Commission built the Crain Highway, now U. S. 301. It was the first new road constructed on a new location since colonial days.

The whole 2,000-mile system built from 1908 to 1922 had consisted of the surfacing of old trails hacked through the province before the Revolutionary War. The Crain Highway, named for a Baltimore lawyer who was its chief backer, set out boldly on a direct route to connect Baltimore with deep Southern Maryland.

The Legislature of 1922 appropriated a million dollars to build this new highway from Mattawoman in Charles County to Benfield in Anne Arundel County, a distance of 32 miles. Here it connected with the General's Highway from Annapolis north through Glen Burnie to Baltimore (State Route 178).⁸

⁷ SRC 1924-26, page 21.

⁸ SRC 1920-23, page 10; SRC 1924-26, page 15.



The superhighway of the Twenties was the Crain Highway—long, straight and the first on new location since the Eighteenth Century. It is now being rebuilt as one lane of newly-dualized U. S. 301. The original road cost \$40,000 a mile.

The road was started in 1922 with ground-breaking ceremonies at Upper Marlboro, where a monument was erected by private interests to commemorate the event, and was completed five years later by the Roads Commission at a total cost of some \$1,250,000, or about \$40,000 a mile. It was opened in 1927 with pomp and ceremony befitting the occasion—said to have been the most elaborate road opening conducted by the Commission before or since.

THE SHORTAGE

In 1928 it was discovered that a number of employees centering around the Purchasing Department, together with outsiders, had stolen from the State property and money totalling \$376,000. The thefts were from the Commission's revolving fund, and the bulk of them was perpetrated through fictitious supply and material purchases.

A Baltimore grand jury investigated the charge. Fifteen men were indicted, thirteen pleaded guilty or were convicted. Eleven of them were sentenced to terms in the State Penitentiary.

These sensational developments produced a grand inquest by the Legislature and the appointment by Governor Ritchie of a citizens' committee composed of outstanding men and with John J. Nelligan as its chairman.

The Nelligan Committee spent many months probing into every corner of the Roads Commission's activities, duplicating in some respects the work of the grand jury. The Committee found that various changes were needed in the accounting system, that the peculations were solely for the benefit of the employees involved, and did not benefit "directly or indirectly any higher officials," and that "the road work of the Commission has been carried on with ability and thoroughness."

The group exonerated all other persons except those who had been convicted, and it specifically cleared the three commissioners who had nothing to do with the unfortunate matter.

In discharging the Nelligan Committee Governor Ritchie said: "This proves the excellency of the roads system and the honesty and efficiency with which it has been administered. I have complete confidence in John Mackall."⁹

Notwithstanding this confidence, the three commissioners resigned in 1929 to make way for a sweeping reorganization of the Commission and its accounting methods.

The State's loss of \$376,000 was in part offset by the recovery of \$146,625 through surety companies, lawsuits and otherwise.¹⁰

These events interrupted but did not impede the Roads Commission in its forward march to better highways.

⁹ *Baltimore Sun*, August 2, 1929.

¹⁰ *Ibid*, September 29, 1931.

Chapter VIII

WASHINGTON BOULEVARD: RISE AND FALL OF NUMBER ONE

From earliest times the historic travel route between Baltimore and Washington has been Maryland's principal problem road.

Colonial travelers bemoaned its mudholes and Twentieth Century motorists its accident rate, one of the worst in the country.

It was the first road paved by the State and became known as State Road No. 1. As a vital part of an Atlantic coastal route from Maine to Florida, it later became U. S. Route 1.

It was the first new road torn to pieces by the heavy army trucks of World War I and when it was rebuilt, it was the first road in the country widened by concrete shoulders.

In recent years it has earned such sobriquets as "bloody Mary," "bill-board boulevard," and "hot-dog highway."

Its history is a story of futility and of frustration.

This highway headache may be over.

Since 1954 new ribbons of concrete have joined the two cities by a park-like freeway, the peer of any in the nation.

In addition, as a part of the new federal interstate highway program, a third expressway is in the planning stages.

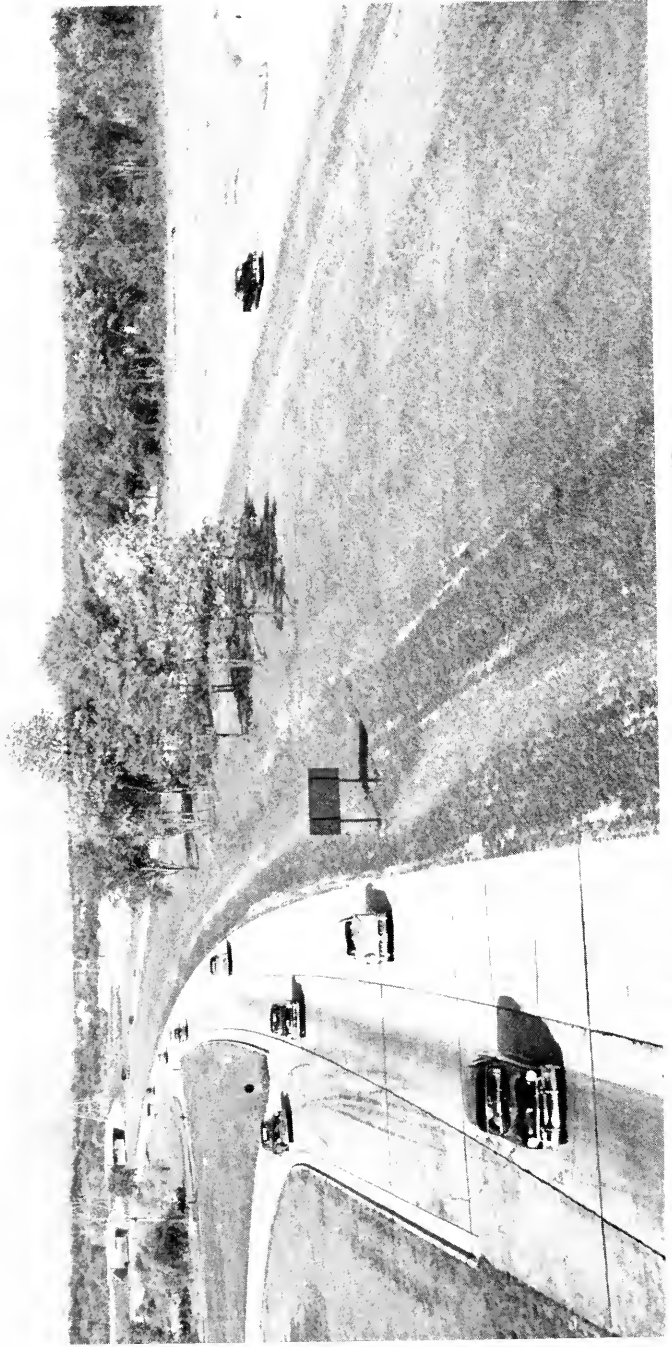
Historically the road dates back more than 200 years. The first section built in 1741 connected Baltimore with Elkridge, then a thriving port. The Patapsco there was crossed by a sort of raft operated by Edward Norwood and to many travelers was known for years as Norwood's Ferry. In 1749 the road was continued to Georgetown on the Potomac.¹

It was a dirt road built by the counties under the 1704 Act requiring cart roads of twenty-foot width. It passed through Waterloo, Laurel and Bladensburg on practically the same location known to modern times. The City of Washington had not been built.

WAGONS DODGE STUMPS IN THE ROADBED

The original ancestor of the Washington Boulevard was "only a line, in a very rude condition," according to one writer. Yet stagecoaches

¹ SRC 1912-16, pp. 68, 70.



Modern section of the Baltimore-Washington Expressway.

plied back and forth and loaded wagons dodged stumps left in the roadbed.

Travelers reported it sometimes took four hours to make 13 miles in the low Patapsco region but that the last 12 miles to the Potomac “seem pretty good as to road.” The fare by stage from Baltimore to Georgetown was four dollars, the distance 45 miles.²

Once constructed, this road, like others in the province, received little attention. In some places the county road supervisors found it easier to cut a new passage through the trees than to mend the old road.

As a traveler observed: “It is very common in Maryland to see six or seven roads branching out from one, which all lead to the same place. A stranger, before he is acquainted with the circumstances, is frequently puzzled to know which he ought to take.” In other places they mended the roads by filling the ruts with saplings or bushes and covering them over with earth.

GEORGE WASHINGTON GETS STUCK IN THE MUD

This haphazard maintenance continued for over fifty years and until after the District of Columbia was carved out of Maryland and the capital city named for the first President.

In fact, Washington himself was stuck in the heavy mud on the road near a branch of the Patuxent River and his carriage pulled out by ropes and poles furnished from a neighboring house.

Maryland’s early lack of care of this road—the principal thoroughfare from New York and Philadelphia to the new capital—was notorious as early as 1796. The travel writer Weld exclaimed: “The roads passing over these bottoms are worse than any I ever met with elsewhere.” He added: “That the Legislature of Maryland can be so inactive and not take some steps to repair this high road to the city of Washington is most wonderful.”³

TURNPIKE BRIGHTENS TRAVEL

The Legislature remained inactive for over a hundred years but relief soon came with the advent of the turnpike period in Maryland. A private company was incorporated in 1796 to build a toll road over the old right of way, but had money troubles and gave up. Sixteen years later, a second company obtained a charter but the War of 1812 and the capture of Washington by the British slowed up construction. Finally, in 1820 a turnpike on a 60-foot right of way was built between the cities.

² Transportation in the United States Before 1860—Carnegie Institute of Washington (1917) pp. 54, 74.

³ Weld’s Travels through North America (1796), page 16,—note; Geological Survey Reports, Vol. III, page 161, 162.

During all of this period of indecision and delay, and during construction of the toll road, traffic was streaming over whatever roadbed could be found and this travel increased year by year. For this road, if it could be called a road, was the only entrance into the nation's capital from Baltimore and the North.

The toll road was built of stone and gravel and it vastly brightened travel conditions. At first it used Norwood's Ferry to cross the Patapsco at Elkridge but in 1817 a timber toll bridge was erected ⁴ by another company, thus causing stage passengers to pay two fees for the trip.

FIRST TELEGRAM IN U. S.

But the days of this turnpike were numbered almost from the start by the coming of the railroads. Soon two rail companies and later an electric line gave quick and easy passage between the two cities.

In 1844 Morse sent his first telegraph message from Washington to Baltimore, over wires strung on poles set inside the right of way of this road. "What hath God wrought" further reduced the need for travel between these points.

The turnpike folded in 1865 when it was condemned by the State because it was not kept in proper repair. It reverted to the counties from which it sprang and again became a county road. The Elkridge toll bridge survived only four more years when its owner sold it to Baltimore and Howard counties for \$5,000.

WANTED: \$285 TO PAVE HYATTSVILLE

With the surge of the Good Roads movement in the Nineties renewed efforts were made to repair the road.

But on all sides resistance was met from the people who, not averse to road improvements, nevertheless refused to raise money for such projects. For instance, inside the limits of Hyattsville, which the Boulevard traversed for a distance of one-third of a mile, the Maryland Geological Survey ⁵ measured a grade of seven and a half percent, a steep slope for a horse and wagon.

The grade could be reduced to four percent and the whole distance paved with gravel for \$285, the Survey found. Prince George's County offered to pay half if the incorporated town would pay the other half. The town refused and the matter was dropped. And so it went all along the line.

⁴ SRC 1912-16, page 69.

⁵ Geological Survey Reports, Vol. IV, page 153.

FIRST STATE ROAD

In 1906, with both bicyclists and fans of the new automobile beseeching it, the Maryland Legislature took action—at long last. It decided to make the rebuilding of this highway a state project and to call it State Road No. 1.⁶

This was a significant and radical change in State policy and was bitterly assailed in the legislative halls, especially by the Eastern Shore and other sections which did not stand to gain by it. Since 1666 the policy had been that each county build what roads it wanted—and pay for them. The new scheme would have all the counties contributing to a road which ran through only three.

The state-road advocates were successful, however, and the Legislature appropriated \$90,000 to reconstruct the thirty miles between Baltimore and the District line. The Geological Survey started the road and the State Roads Commission finished it. It was built to a 14-foot width of macadam, gravel and in some sections, concrete. Grades were reduced, some parts straightened and relocated and four of the seven dangerous railroad grade crossings eliminated.

A new concrete bridge replacing a former iron structure, was built on old stone masonry piers at the Elkridge crossing of the Patapsco and new concrete girder bridges were built over Eastern Run and Anacostia River near Bladensburg.

FIRST BOULEVARD COST \$20,000 A MILE

When the Boulevard was finally completed in 1915 it was found to have cost a total of \$628,553,⁷ including bridges, or \$20,950 per mile—the highest price yet paid in Maryland and a real shocker to the people.

SUNDAY DRIVE TO WASHINGTON

But the people of Maryland had a prize road, one of the finest in the country. In goggles, caps and dusters they mounted their 1915 flivvers and breezed over the smooth surfaces and fancy new bridges.

Travel from Baltimore to Washington and back became a popular Sunday afternoon pastime. Little shacks sprang up on the roadsides to cater to the pleasure cars. Blacksmith shops became garages and signs appeared on the Boulevard such as “We Fix Flats.”

The future of “hot dog highway” was assured.

⁶ Acts of 1906, Chapter 312; Geological Survey Reports, Vol. VIII, page 49.

⁷ SRC 1912-16, page 71.

ROAD RUINED AFTER THREE YEARS

World War I brought a new and unforeseen enemy to the road—the steady pounding of solid rubber tires of thousands of army trucks. Built to stand up under light pleasure cars the road crumbled and turned to rubble. The winter of 1917-1918 produced a record cold and still further damage.



Heavy Army trucks damaged the new road surface.

So three years after it was built, Maryland's proud State Road No. 1 lay a torn and twisted mass in spots, far worse than the earlier dirt road.

REBUILT WITH CONCRETE

In 1918 and 1919 the Boulevard was rebuilt at an outlay of some \$350,000, making the total cost to the Roads Commission from 1908 to the end of 1919 a sum of \$973,352,⁸ or more than \$32,000 a mile.

Many sections which were lost beyond repair were rebuilt with concrete twenty feet wide; sections of macadam which could be redeemed were widened to twenty feet with concrete shoulders and resurfaced.



Dead Man's Curve removed in 1919.

A sharp turn in the road one-half mile south of Elkridge already had had so many fatal accidents that it was known as "Dead Man's Curve." This place was eliminated in 1919 by relocation and the Commission announced: "This has entirely removed the source of danger."⁹

Other new and hitherto untried safety measures were installed. All culverts, telephone poles and headwalls were whitewashed and the Commission said: "Travel, especially at night, is much more satisfactory as well as less dangerous."

⁸ SRC 1916-1920, page 67, Exhibit E.

⁹ *Ibid.*, pp. 7, 8.

U. S. 1 IN 1925

In 1925 State Route 1 became part of U. S. 1, the main street of the East Coast from Fort Kent, Maine to Key West, Florida.

This promotion in status brought an even greater flow of interstate travel and new roadside services. About 6,000 cars and trucks a day were roaring along the road, crowding its twenty-foot pavements and leaving in their wake a trail of crashes, injuries and violent death. So, once again, the old highway was rebuilt.

REBUILT TEN YEARS LATER

From 1928 to 1930 the roadway was doubled in width to forty feet and resurfaced.¹⁰ This meant extending all the bridges. The improvements cost over a half million dollars but it was believed that now the traffic problem was licked.

By this time the edge of the road in many places lay right against the doorsteps of countless buildings that had sprung up along the Boulevard; no further expansion was possible without costly condemnation.

During the Thirties the road became the midway of America, a sort of flying carnival as more and still more traffic zoomed over the four-lane undivided highway.

BIRTH OF BILLBOARD BOULEVARD

Billboards and other advertising signs grew up in every size, shape and color. Mrs. Edward H. McKeon, a Baltimorean prominent then, as now, in garden club and other civic work, rode along the road and counted the billboards. Total: 1,099 or 39 to a mile.¹¹



By 1934 there were over a thousand billboards on the road.

¹⁰ SRC 1927-30, page 252.

¹¹ Baltimore Sun, July 22, 1934.

The Boulevard was dotted with pottery stands and blanket stalls. With repeal of Prohibition in 1933, roadside speakeasies pulled up their blinds and called themselves restaurants and bars. One was built like a Mississippi sidewheeler, another like a Western dude ranch. As one motorist reported: "The atmosphere is not bucolic but alcoholic."¹²

By 1938, when 18,000 cars and trucks were passing by daily, the hundreds of roadside merchants had organized into a Baltimore-Washington Boulevard Association.¹³ Each stop of the motorist, of course, meant one more interruption to the orderly flow of traffic: a deceleration, a pull-out, a frantic dash into the traffic lane and a speed-up.

The Association was in favor of any and all improvements the State Roads Commission could make to the old road in order to keep the tourist dropping by. It was dead-set against a new highway on another location.

NEW HIGHWAY ONLY WAY OUT

Yet a new highway was coming. That was the only way out of the frightful mess of U. S. 1. The latter simply could not be improved. Its closely built-up roadsides with their unlimited entrances had given it hardening of the traffic arteries. It was a nightmare.

In 1939 Governor Herbert R. O'Connor and Maryland's road officials met other highway chiefs in New York to talk about a superhighway running from Boston to Washington.

As the Washington *Times-Herald* described the meeting: "This new road would supplant historic and ruined old 'U. S. One,' the most heavily traveled and deadliest stretch of road in the world. One of the most important proposals is to junk that section of U. S. One between Washington and Baltimore and replace it with a modern parkway.

"There has been plenty of easy talk about this from Maryland politicians for years and we have been stung time and again on believing them. Somehow we like to believe Mr. O'Connor is going to be different."¹⁴

The new expressway finally came, a joint effort of Maryland and the Federal Government. It was the dream highway of mid-century—everything that old U. S. 1 was not.

RIGHT OF WAY UP TO THREE HUNDRED FEET WIDE

It ran as a parkway through thirty miles of gently rolling Maryland countryside with no crossroads, no stop-lights, no billboards and no roadside establishments.

¹² *Ibid*, June 23, 1940.

¹³ Baltimore-Washington Boulevard *Traveler*, June 1938.

¹⁴ Washington *Times-Herald*, December 14, 1939.



The Baltimore-Washington Expressway connects at its southern terminus with the Kenilworth Interchange, Maryland's most complex grade separation structure.

Both Baltimore and Washington caught the spirit of the times and built elaborate and costly new approaches to it.

The expressway was designed, not as a dual highway with a median strip, but as two separate roadways, each to fit the terrain as a single road. Thus the travel-strips may run on different elevations, close together or far apart, depending on land contours and other factors. At places one roadway is not visible from the other.

The right of way varies from a minimum of 300 feet to 400 feet. This was not a new design standard when the ribbons were cut in 1954, but neither was it very old. The parkway was strictly up to date.

A MILLION A MILE

Under leadership largely furnished by Maryland's Representative George H. Fallon, Chairman of the House sub-committee on Public Works, the Federal Government built 19 miles, including three bridges and fifteen grade separation structures, at a round figure cost of \$16,500,000.

About one-half of this mileage was on the federally-owned property of Fort Meade and the National Agricultural Research Center. However, the government spent some \$450,000 on right of way in the heavily built-up lower end, a project on which it saved money by starting as early as 1946.

The State Roads Commission spent about \$14,200,000, including two long bridges and fifteen grade structures, on its ten miles adjacent to Baltimore. The whole project averaged \$1,060,000 a mile.¹⁵

Grades do not exceed three and a half per cent, nor curves three degrees. The paving is mostly portland cement concrete, the federal section having eight-inch concrete slabs and the Maryland part ten-inch. The federal portion was built to parkway standards—which meant no trucks. In Maryland trucks may use any public highway so the state-built section carries mixed traffic—passenger cars and trucks.¹⁶

In addition to the built-in safety features of the road, there are such added factors as new reflectorized signs and special protective guard rails on a railroad overpass—aluminum-tubed arches over the sidewalks.¹⁷

In 1955, the first year the expressway was fully open, it carried an average daily traffic of 18,000 vehicles, which by 1958 had increased to an average of 27,000 vehicles. U. S. Route 1 was still carrying 17,000 vehicles per day, and the traffic on State Route 29 between Baltimore and Washington has doubled in 15 years.

FEDERAL PART TO MARYLAND?

The pavement was hardly dry on the final sections before the federal authorities made overtures to give its part to Maryland.

Like those for the National Road before it, the congressional appropriations had been entirely for construction and not for subsequent upkeep. This maintenance fee was estimated at \$3,000 a mile, or \$57,000 a year.

Maryland was a reluctant beneficiary of this federal largess. It, in effect, looked the gift-Cadillac in the mouth. As one observer reported:

¹⁵ *Engineering News-Record*, New York, January 28, 1954.

¹⁶ *Highway Builder*, November 11, 1953.

¹⁷ *Engineering News-Record*, New York, April 14, 1955.

“The United States is having trouble giving away its share of what is perhaps the most highly publicized free highway in the country.”¹⁸

SERVICE ON THE EXPRESSWAY?

Travelers on the expressway will find new accommodations if present plans of the Roads Commission materialize.

As an experiment, a service area is planned south of the Dorsey road interchange where a gasoline station and a restaurant will be built by private interests under a competitive bid lease arrangement with the State.

Patterned after the service areas on the turnpikes in the northern states and Boston's circumferential highway, this facility will be the only place to buy gas, food or service between Washington and U. S. 40 east of Baltimore, for motorists who use the expressway and the tunnel system.

PLANNING FOR A THIRD ROAD

During the summer of 1958 travelers to and from Washington were being stopped by a corps of young men doing an “origin and destination” study. This was part of the planning for a future third highway in the tale of two cities, one that will connect with high-speed cross-city expressways envisioned under the Federal Interstate Highway Act of 1956.

¹⁸ *Transport Topics*, April 18, 1955.



Stature or forced labor was not popular or successful in Maryland. The laborers had no heart for the work and the foreman (left) was inexperienced in the fine points of grading and drainage. Their equipment was simple farm tools, the hoe and the spade. Here a couple of early bicyclists have ridden out to see how the road is shaping up.

Chapter IX

HIGHWAY HOUSEKEEPING—STUDY OF MARYLAND MAINTENANCE

The Roads Commission early recognized that keeping up the new roads was just as important as building them.

In 1910, before the first mile of the state road system had been completed, a Maintenance Division was established by the Commission and heralded with the statement: "It is useless to construct expensive roads unless they are to be protected from the traffic."

Chief Engineer Crosby observed that "the requirements of maintenance work demand the careful performance of little things—'many a little makes a mickle'."¹

NEGLECTED STEPCHILD

This awareness of the need for highway maintenance was significant.

Throughout recorded history, the repair of roads has been a neglected step-child. The classic example was the method of the Federal Government itself. Appropriating millions to build the National Road out of Cumberland, it nevertheless at first refused to spend a cent on upkeep, with the result that the great road to the west broke up almost as soon as it was laid.

But Uncle Sam was merely following a long and tragic policy that seems to be grounded in human nature: road-making is creative and somewhat spectacular so men will spend money on construction; upkeep, like housekeeping, is dull business, so the public and legislators tend to neglect it.

SINS FORGIVEN IF THEY WORK THE ROADS

The Romans partially solved the maintenance problem on their 53,000-mile road system by using slave labor. In old England there were no slaves so the Church in many places took on the job of road repair.

¹SRC 1908-12, pp. 26, 101.

In 1411 Bishop Stafford granted an "indulgence," or remittance of punishment for sins, to those persons who would work on the roads near Plymouth. In fact the clergy who wrote most wills often included a legacy for the upkeep of highways.

In 1435 such a bequest left ten pounds sterling "for the repair of foul roads and feeble bridges." The maintenance thus provided, however, was fragmentary: "sticks and rocks thrown into potholes and covered with earth and stones."

The first general road-repair law was passed by Parliament in 1555 and set the standard for the later American colonies. It required land owners to "send their carts, horses, men and tools, four days in every year, for mending the roads."²

In Maryland early road maintenance was entirely a matter of private concern. Abutting property owners and those who wished to use the primitive trails kept them in makeshift repair. Even the first road law of 1666 dealt only with construction although it provided for a system of road overseers.³

EARLY MARYLANDERS REQUIRED TO WORK ROADS

The important road act of 1704 first took official notice of maintenance in Maryland. It ordered the overseers to keep their roads clear, under penalty of a fine of 500 pounds of tobacco. It also required land owners to furnish "male servants" for road work when called upon by the overseer, on the pattern of the English law of 1555. An act of 1732 exempted from this law any "white man or slave employed in any iron-works."⁴

This was the beginning of "statute" or forced labor on Maryland roads. It was important for two reasons. The Legislature recognized the need for a general state-wide law for the upkeep of the highways. It filled the need in an equitable manner by causing all citizens to work on the roads either personally or through their slaves or employees, thus avoiding road taxes.

FORCED LABOR UNSUCCESSFUL

The system was a failure. The overseers were petty officials appointed by county authorities. They had complete discretion in calling for labor contributions from the citizens. There was therefore unlimited oppor-

² Public Roads of the Past, Washington (1952), a publication of the American Association of State Highway Officials, page 28.

³ Geological Survey Reports, Vol. III, page 110.

⁴ Acts of 1732, Chapter 17; Geological Survey Reports, pp. 120, 124.

tunity for favoritism and abuse. Those summoned resented being forced to work.

The character of work was inadequate. The overseers generally were ignorant in road matters. They had but the haziest notions of proper drainage and grading. Their equipment was primitive and labor was listless. After every rain the road once again was a sea of mud.

This state-wide statute remained in effect down to the Twentieth Century, but county after county had local laws passed by the Legislature exempting them from its requirements and setting up their own system. By 1900 only Wicomico and Worcester retained forced labor and here the citizens were permitted to pay for a substitute.⁵

The first sub-division to break away from statute labor was Baltimore County in 1766. By 1794 twelve counties had made provision for road taxes for highway maintenance.⁶

Regardless of the system employed in Maryland, no substantial improvement was noted in road maintenance during the Nineteenth Century. Great effort was expended but the mountain labored and brought forth a mouse. Discussing sandy Eastern Shore roads in 1898 a report said they were in poorest condition when dry but "if too wet they are also bad and there is seldom just the right proportion of moisture to render the road at all firm."⁷ There was not much that could be done with dirt roads.

POOR COUNTY MAINTENANCE

By 1900 each county had an organized road department operated by the county commissioners who hired the supervisors and assigned each one certain mileage for which he was responsible. These supervisors were untrained part-time men.

In reporting on this procedure, a 1900 statement of the Maryland Geological Survey said: "Supervisors feel called upon to leave a trace of their work at every point along the roads allotted to them, with the old result of no practical improvement, each season removing all traces of the previous season's work. The thin veneering of improvement is soon lost and the roads return to their former condition."⁸

SRC MAINTENANCE WORK STARTS

The new Maintenance Division of the Roads Commission began its work in the summer of 1910.

⁵ Geological Survey Reports, Vol. III, page 257.

⁶ Acts of 1794, Chapter 52; Geological Survey Reports, Vol. III, pages 147, 148.

⁷ Geological Survey Reports, Vol. III, page 196.

⁸ *Ibid.*, Vol. IV, page 97.

It started with a background of knowledge and experience accumulated by the now superseded Survey Commission. In fact, the first Maintenance Engineer came to the Commission as an inheritance from the Survey. He was William D. Uhler, of Caroline County. In its first few months the Division assumed jurisdiction over 71 miles of the new state road system opened at the end of that year.

To combat the dust nuisance of the automobile it oiled and pitched this mileage at once. Its work in this field soon received national attention as other states also were looking for ways to accommodate the new motor vehicle. In 1911 the Chief Engineer reported that the use of bituminous materials for maintenance "has attracted much attention from the other states and even from abroad. The results secured compare favorably with those had elsewhere."⁹

THE MAN WITH THE GOLD-LETTERED CAP

Maryland was one of the first states to establish a separate Maintenance Division. It also was one of the first—if not the first—to organize its maintenance work by assigning every mile of its roads to the care of specially equipped persons known as patrolmen.

Each one of these men was given into his charge a section of newly completed macadam road. He generally lived in the neighborhood and was assigned from four to eight miles as his territory, the extent depending on the density and character of traffic as well as other factors.

The patrol system of maintenance, established in 1910, was an integral part of road upkeep until 1930. It was considered highly satisfactory and was abandoned only because motorized equipment was making such hand labor unnecessary. By 1915 there were 76 patrolmen in charge of 501 miles of road, averaging 6.6 miles per man.

The road patrolman was a colorful figure not easily forgotten by early habitues of the Maryland road system. Each one wore a cap marked in gold letters "STATE PATROLMAN." He wore a number on his arm and carried a red flag which he placed on the ground as a protection against motorists,



A 1920 patrolman with his tools and supplies.

⁹ SRC 1908-12, page 58.

and also as a signal that he was on the job if a District Engineer dashed by on his motorcycle.

The value of the system lay in its immediate attention to damage. If a surface was neglected until a hole formed, the maintenance work was multiplied.

But a vigilant patrolman did not let the damage go that far. As soon as he noticed the slightest wear he planted his red flag and went to work. Usually, all he needed to do was paint the bare spot with bituminous material, cover it with stone chips and tamp it down, bearing out the old saying that a stitch in time saves nine.

Patrolmen were inspected and rated constantly by the resident maintenance engineer. They vied with each other over these ratings as each wanted his strip of road to look the best and get the highest mark. Under the Mackall administration cash prizes were awarded patrolmen for the best sections and signs were erected on the roadside advising motorists of this fact.

For their work, patrolmen were paid between \$2 and \$2.50 per day for a 10-hour day. Sometimes instead of a wheelbarrow they used a horse and cart, in which event they were allowed fifteen cents an hour extra for its hire.¹⁰

HIGHWAY WORK REDUCES PRISON IDLENESS

In June 1917, under pressure of wartime labor shortages, the Commission launched a program of road maintenance by labor from Maryland's penal institutions. Governor Harrington worked out the plan which started with 18 prisoners and by 1919 used 327. They were engaged mainly for oiling work and spreading chips behind a bituminous distributor.



Since the passing of the patrol system, maintenance work has become mechanized as shown in this current photo.

The practice had a venerable historical precedent.

In 1788 the Legislature passed a statute directing the courts to order vagrants and persons convicted of certain crimes to labor upon the roads of Baltimore County.

¹⁰ SRC 1908-12, page 102; SRC 1912-16, pp. 38-40; A. F. Shure, personal reminiscences.

One writer of the period called them "wheelbarrow men" and told of seeing large groups of prisoners working on the highways near Baltimore. "Accompanying each group is an overseer," he said, "wearing side-arms and often carrying a musket."

With the Dark Ages of the highway following the coming of the railroad and with the development of the penitentiary system, the use of such labor was suspended.

The present system dates from 1938. The first camp for fifty prisoners was opened on Warehouse Creek near Chester, Kent Island. The Chief Engineer of the Roads Commission that year was able to say: "The first two months of the new prison labor road program has been a distinct success."¹¹

There are now camps at Chester, at Quantico in Wicomico County and at Hughesville in Charles County. Some 350 prisoners regularly work on the roads during the construction season.

During the past twenty years the program has been uniformly successful, reducing prison idleness while at the same time helping in highway housekeeping.

MAINTENANCE DEFICITS START EARLY

The Legislature from the first has recognized that construction and maintenance of state roads should be financed separately. In 1910 it passed the "Automobile Law"¹² setting up a special fund for maintenance entirely apart from the construction fund financed by successive bond issues.

The fund so provided came from license fees paid by Maryland motorists on the 4,500 motor vehicles licensed in that year. During the first year the Commission was awarded \$26,576 for its portion and in the fifth year \$190,334, reflecting both the increase in completed state roads and in motor vehicle registration (30,000 in 1915).

When Governor Goldsborough assumed office in 1912 he was immediately concerned with the inadequacy of this maintenance fund. "The people demand the roads and are willing to pay for them," he said. "It is folly to put money in them unless they are kept up."¹³ On his recommendation the Legislature provided for a one-cent direct annual State tax for maintenance. By the end of 1915 this tax was yielding \$95,893 a year in addition to funds under the license tax.

¹¹ Baltimore *Sun*, May 9, 1938; *Ibid*, July 30, 1938; *Ibid*, October 13, 1939; Sutcliff's *Travels in North America*, Philadelphia (1812), page 48; Geological Survey Reports, Vol. III, page 159.

¹² Acts of 1910, Chapter 207.

¹³ Baltimore *Sun*, October 4, 1912.

Both of these revenue sources proved inadequate, however, to finance the ravenous demands for repairs during the war years. With the new and heavy trucks burning up the thin road surfaces, and with wartime costs up, a deficit mounted in the maintenance account year by year.

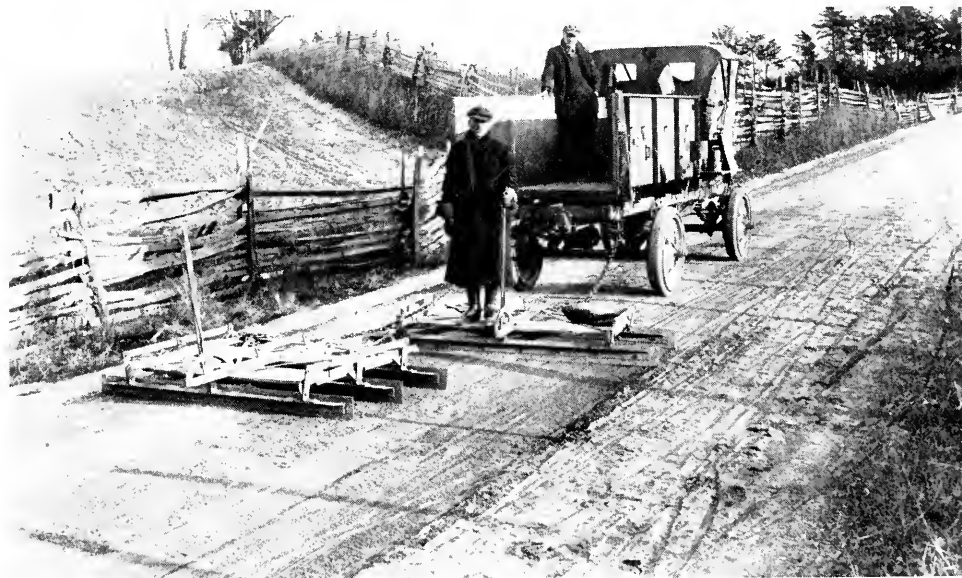
So in 1920 construction funds were first transferred to use of the Maintenance Division.¹⁴

But a new source of revenue was found in 1922. The one-cent gasoline tax imposed that year provided that the first receipts should be used to liquidate the balance of the deficit in the maintenance account. License fees and other highway users' taxes have continued through the years as the principal revenue for maintenance, but they have never been sufficient.

Today the Commission maintains about 5,000 miles of roads, counting dual highways as double maintenance. The budget for the current year is \$9,772,424, of which four million comes from tax revenues in the Construction Fund.

THE DISTRICT ENGINEERS

The maintenance work in the field is directed through seven divisions or districts, each in charge of a district engineer. This system was



A road drag designed for maintenance of gravel roads in Southern Maryland in 1916.

¹⁴ SRC 1908-12, pp. 26, 42, 66; SRC 1912-16, page 43; SRC 1916-20, page 59; SRC 1920-23, pp. 12, 128.

founded by Chief Engineer Shirley in 1912 and has worked satisfactorily through the years.

Each district engineer has an assistant with a district-wide assignment whose duties are to coordinate and direct the manifold maintenance activities. Each district engineer also has an assistant for construction.

Most of these men are natives or long-time residents of the localities which they serve. They are uniformly men of substance and standing in their communities. The vast majority of people in their sections think of these men whenever a roads question is mentioned.

NOW SEVEN DISTRICTS

The first district, comprising the four lower counties of the Shore, is presided over by C. Albert Skirven of Salisbury. The second district is composed of the five upper counties. The district engineer, Rolph Townshend of Chestertown, was detached in 1958 from that district and given supervisory maintenance duties in all nine counties of the Shore, operating under division headquarters in Baltimore. C. Roland Sharretts of Chestertown is serving as district engineer.

The third district is made up of the two counties of Prince George's and Montgomery and is in charge of Lisle E. McCarl, with headquarters at Laurel. Baltimore and Harford counties comprise the fourth district under Enoch C. Chaney of Reisterstown.

The fifth district takes in the four Southern Maryland counties and its district engineer is Edward G. Duncan whose office is at Upper Marlboro. The three far-western Maryland counties compose the sixth district, under G. Bates Chaires of Cumberland.

The seventh and final district includes the counties of Frederick, Carroll and Howard whose district engineer is Thomas G. Mohler of Frederick.

Director of Highway Maintenance for the State until his 1958 retirement was P. A. Morison, a career man whose period of service with the Commission dates back to 1911. From 1922 to 1946 he was district engineer for the first district and lived at Salisbury. State Maintenance Engineer is Frank P. Scrivener, who came to the Commission in 1922 and has held his present post since 1931.

SNOW—THE GOOD LORD PUT IT THERE

Prior to 1920 no effort was made by the Roads Commission or any other agency to clear snow from public roads. Snow was considered an Act of God and a heavy storm closed the roads. General thinking was neatly

expressed by the man who said: "The Good Lord put it there and if you give Him time He'll take it away."

Maryland was one of the first states to hasten the work of nature by an organized snow-removal campaign. In the winter of 1920-1921 500 miles of principal highways were kept open. The following year 1,500 miles were cleared and in the winter of 1922-1923 the service was extended to the entire state system which then totalled some 2,000 miles.

SNOW REMOVAL A WASTE OF MONEY?

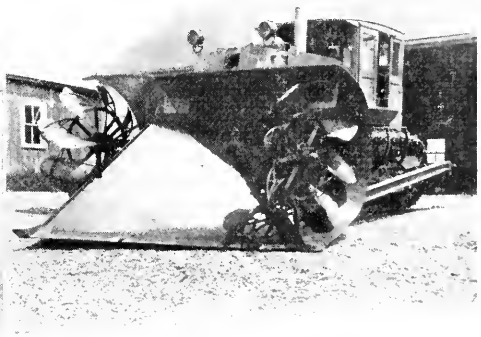
Many people in Maryland wanted the service, pointing out that lives might be saved if physicians could get through to sick patients in rural areas. Others thought it a complete waste of money since the snow would melt anyway, eventually.

The Roads Commission made careful tests in the winters before 1920 to determine if the practice could be justified not only on humane grounds, but also economic. The results were reported as follows: "After considerable experimenting, it was demonstrated that the great amount of snow and hail that was allowed to remain on the road did much damage and it was further shown that the cost of removing the snow, at least on the main lines, would be entirely offset by the cost of repairs to the surface in the spring."

For the winter 1922-1923, when the snow averaged 22.5 inches, the 2,000 miles were cleared at an estimated cost of \$20,000 or \$10 per mile.¹⁵



Before the days of the heavy mechanized equipment, snow removal often was by hand shovel or horse-drawn plow.



This is a type of rotary snow tractor in use in Western Maryland today.

¹⁵ SRC 1920-23, page 17; SRC 1924-27, page 20.

The cost now is about \$120 a mile in a normal winter.

Chairman Mackall described the first plan of snow removal in a national trade journal in 1922: "Special warnings of snow storms are sent out by the U. S. Weather Bureau to the district offices so that equipment may be started at the beginning of the storm, for it has been clearly shown that snow removal can be effectively carried on only when work is begun immediately."¹⁶

1958: THE HEAVIEST SNOWS

Oddly enough, the most damaging snow storms and the most costly snow experience of the Roads Commission occurred in the anniversary year of 1958. The price tag for snow removal ran to a record figure of \$1,419,625 in comparison to a recent average year's cost of about \$600,000.¹⁷

The 1958 test was the most severe in the 38 years of snow removal.

¹⁶ Concrete Highway Magazine, Vol. VI, No. 5 (May 1922), page 103.

¹⁷ SRC Maintenance Division records.

Chapter X

THE "LAB"

Maryland's early road building pre-eminence can be traced in large measure to its scientific testing of road materials.

The Roads Commission's testing laboratory is its oldest division and antedates the Commission itself by ten years. The Highway Division of the Maryland Geological Survey Commission, the immediate predecessor of the Roads Commission, established the "lab" in 1898 as one of its first acts.¹

At that time the testing of road materials was practically unknown in the United States. Counties and municipalities bought such materials in the same manner as they bought other supplies—largely on the recommendation of sales representatives.

After the early laboratory had rejected a shipment of inferior material sent into the State, a shocked factory representative paid a hurried visit to Baltimore to find out what was wrong. On being shown the results of the tests he exclaimed: "If we had supposed you were testing materials in Maryland we would have shipped a better product."

In its final report in 1910 the Survey cited this incident and added: "How much saving has been effected by the mere existence of the testing laboratory it would be difficult to estimate."

EARLY TESTS MADE ON CEMENT AND BRICK

With the advent of concrete construction in road building, provision was made by the Survey for the testing of cement and much work was done not only for the State but also for the counties and towns. Brick roads and streets were popular in the early days of the century and the Survey made some 900 tests of various bricks.

In its final months the Survey was starting bituminous tests and its farewell words on the work of the Lab in 1910 were these:

"Still more recently tests have been undertaken to establish the comparative values of bituminous materials for use on roads and this experi-

¹ Geological Survey Reports, Vol. III, page 326.



Since 1951 the Commission's Laboratory has been housed in this building on Albemarle Street in Baltimore.

mental work must be continued if the State is to preserve its roads from the destructive effects of automobile traffic." ²

The Lab was then, as it is today, the watch-dog of road materials used on the State system.

Thus, by the time the Survey's highway division was transferred to the new State Roads Commission, the Laboratory had a nation-wide standing in its field.

MATERIALS DEPARTMENT ESTABLISHED

The period from 1915 to 1930 was one requiring great expansion of activities as the motor car appeared in ever-increasing numbers. The highway engineer had discovered that by putting aside outmoded practices and designing highways according to new and improved principles, extensive testing was necessary.

By this time the Laboratory had grown to such an extent both in personnel and activities that a controlling force was necessary to coordinate it. In 1931, a "Materials Department" under the direction of a "Materials Engineer" was created, bringing together under one head previously scattered activities. Under such a unified arrangement, inspection and testing became more detailed and policy evolved resulting in a smooth-working organization. The result was better control and a demonstration that certain economies could be readily effected.

Control outside the Laboratory was also increasing and, with the greater complexity of highway design, new inspection procedures had to be considered. Road roughness was measured with a newly-designed instrument and checks of the thickness of concrete pavements were made by drilling cores at regular intervals in the completed highways.

LAB GETS NATIONAL AWARD

As the testing facilities expanded to include all phases of highway construction, more laboratory technicians and inspectors were required. By 1937, the Laboratory was acknowledged as a modern facility of that period. While the emphasis had been on control, a constant effort was evident to increase proficiency in the testing field. This effort was recognized by the award of a Certificate of Accuracy from the Cement Reference Laboratory of the U. S. Bureau of Standards.

Among the many materials investigated were bituminous concrete, air-entraining cement and new formulations for paint.

² Geological Survey Reports, Vol. IX (1910), page 84.

EXPERIMENTS IN RE-SURFACING OLD CONCRETE

The use of bituminous concrete, a mixture of aggregates and asphalt mixed and placed while hot, proved a good method of resurfacing twenty-to-thirty-year-old concrete pavements. This system was a challenge and offered the opportunity to devise specifications which make maximum use of more economical local materials. Studies of acceptable combinations were determined and used to advantage.

GLASS BEADS ON THE ROADS

During the early 1950's the Commission began using reflectorizing glass beads in conjunction with paint to improve the night visibility of traffic lines. Several years of investigation and tests preceded the generalized use of this material. The beads, sprayed on the centerline stripe as it is applied to the road, increase the visibility of the stripe at night by seven to fifteen times, dependent upon atmospheric conditions. As a result of tests, specifications were adopted to control the quality of the beads. A visibility meter was acquired, capable of checking the effective brightness of the beaded line on the road or in the laboratory.

Since 1954 the Laboratory and its various functions have been known as the Bureau of Soils and Materials. It is under the direction of J. Eldridge Wood, Materials Engineer.

Part III

THE SECOND TWENTY YEARS OF THE STATE ROADS COMMISSION

(1928 — 1948)

Chapter XI

DEPRESSION STRIKES THE ROADS SYSTEM

During the decade of the twenties the road-building emphasis in Maryland had been on the secondary system, the network of feeder roads that brought the people to the principal highways built before World War I.

From 2,000 miles of hard-surfaced roads on the state system in 1920 the total in 1930 had grown to 3,200.¹ Most of the new mileage represented local roads.

This shift in policy was in accordance with the mandate of the good roads movement: to get the farmer out of the mud.

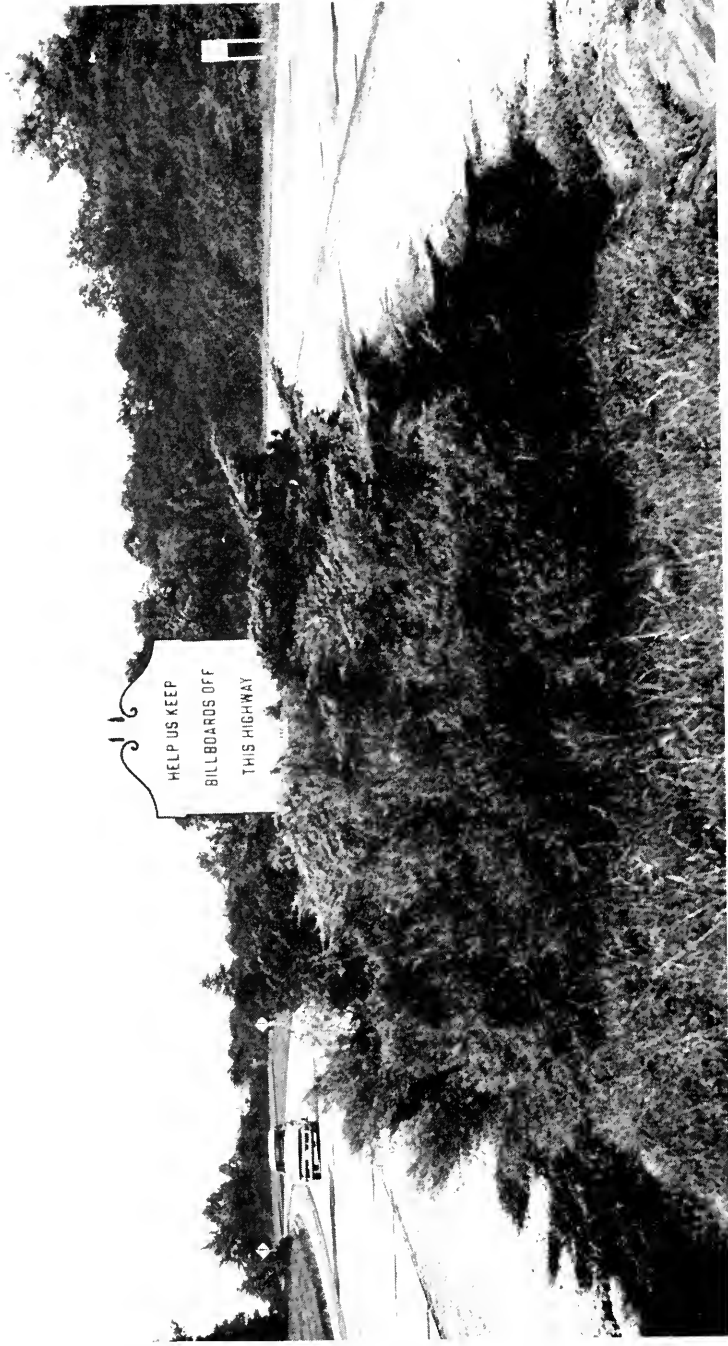
Moreover, the primary system was considered adequate. It not only had been well built and regarded as a model for other states; it also had been widened, resurfaced once or twice, and in some cases rebuilt, as for example the Washington Boulevard.

Yet by 1930 this primary system had become inadequate. Its builders had not foreseen trailer-trucks, the huge freight cars on wheels that had begun to appear. Nor had they anticipated the tremendous increase of passenger cars.

Other states that began later than Maryland profited from fresher traffic forecasts and higher design standards. Maryland's primary system rested on its laurels.

This static state of affairs was recognized by the Roads Commission in 1934 when it summed up the situation in these words:

¹ SRC 1927-30, page 20.



When the new dual highways were built in the early Thirties earnest efforts were made by garden clubs and others to persuade advertisers not to erect billboards. At first, these efforts were successful. (See page 108).

“Through the period 1915 to 1925 Maryland was generally acknowledged throughout the entire United States as the best-roaded state in the Union. About this time other states began issuing bonds in large amounts for the construction of roads, and in building them benefited by the experience of Maryland and other pioneer states in highway construction.”²

But the 1930's and the early 1940's were not years in which vast highway programs could be launched. The depression was a period of retrenchment on all fronts. During World War II expansion was impossible.

So a modern highway system, which should have been started in the late Twenties, was deferred until the late Forties.

There were nearly twenty lean years in Maryland's struggle to keep afloat in the stream of modern traffic.

REORGANIZATION

Following the resignation of his three commissioners in 1929 Governor Ritchie sought to give his Roads Commission a new look and restore a shaken public confidence in the administration of state roads finances. To accomplish this he drafted two prominent Baltimore business men: Howard Bruce and John K. Shaw.

For Chairman he named G. Clinton Uhl, the Allegany County merchant who had been an associate member of the Commission in the Harrington administration.

An engineering graduate of Virginia Military Institute, Bruce had a reputation in Baltimore at the time as a trouble-shooter, a good hand at reorganizing and building up whatever shaky foundation he touched.

Shaw was the minority member, a respected business leader of Baltimore County.

The new commissioners made three new appointments. To fill the Mackall vacancy as Chief Engineer they promoted his assistant, Harry D. Williar, Jr. William A.

Codd, who came from the Accounting Department of Baltimore City, was appointed to the new position of Chief Auditor with instructions to install a new accounting system. Another new post, that of Treasurer, was filled by Waring P. Carrington.

The first order of business was revision of the accounting set-up, to which all the new officers directed their energies. They called in as consultants the guardian of the taxpayer's dollar, the Commission on Governmental Efficiency and Economy, a privately financed civic group.



Mr. Uhl

² SRC 1931-34, page 12.



Mr. Williar

The Treasurer's Division was created to record receipts, account for disbursements and to perform other such functions. This sub-unit does not exist today, its duties having been absorbed by the Accounting Department.

Robert M. Reindollar, who had been Engineer of Surveys, was made Williar's Assistant Chief Engineer.

THE ENGINEERS CARRY ON

In the meantime, definite progress was being made in the construction field.

In 1915 the state roads system made few connections at state lines because interstate travel was negligible. By 1930 it had made fifty such connections.

A Maryland sector of the Northwestern Turnpike had been built across the southern part of Garrett County, becoming Maryland's portion of the new transcontinental highway, U. S. 50.

Other new highways built up to 1930 included a road from near Upper Marlboro southeast to Sunderland (now State Route 416), connecting Washington with the Calvert beaches; a road from Salisbury to Snow Hill (State Route 12); a direct run from Mt. Airy to Westminster (State Route 27); and an "Eastern Shore Boulevard" from the new ferry slip at Matapeake to Queenstown, Wye Mills, Hillsboro and Denton (now U. S. 50 and State Route 404).

ELIMINATING RAILROAD GRADE CROSSINGS

The gasoline tax, which started in 1922 at one cent a gallon, was four cents by 1929. Of this sum, one-half cent was earmarked for the elimination of railroad grade crossings, a program in which the respective railroads participated to the extent of fifty percent. The railroads benefited by the elimination of crossing gates, 24-hour watchman service and the reduction of damage suits. By 1930 the Roads Commission had eliminated 21 grade crossings with plans for eliminating 13 more.

NEW FACES

In 1931, twenty-eight months after their appointment, Howard Bruce and John K. Shaw resigned, their mission accomplished.

To replace them, the Governor named E. Brooke Lee of Montgomery County and Robert Lacy of Baltimore. Lee was a real estate broker and

a former Speaker of the House of Delegates. Lacy was a Baltimore engineer. Clinton Uhl continued as Chairman.

NEW ROAD TO THE NORTH

The State's principal new construction of the early Thirties was a road from Baltimore to Aberdeen, a thirty-mile divided highway that was strictly modern and designed to end the crippling congestion on old Philadelphia Road.

This highway on new location, paralleling the railroads and by-passing the towns, was built not without serious misgivings on the part of many interested persons.

New locations and bypasses were novel in those days. They meant serious loss of business and even bankruptcy for some establishments along the old route. It was a time of economic difficulty. The citizens who came to the Roads Commission office to state their views were ten to one in favor of improving the old road.

The road was finally built on a new location only because the Federal Government, which was putting up half the money under the Federal-Aid program, would not approve the widening of the old road.

Such was the slender thread upon which our present U. S. 40 East rested, then a bitterly-fought but thoroughly modern highway, now a road which because of uncontrolled access is over-burdened with marginal friction and is about to be replaced by a modern freeway.

MARYLAND TRIES THREE-LANE ROADS



Typical three-lane road of the Thirties. This photo was taken on Bel Air Road.

The early Thirties saw the development throughout the country of a new feature in highway travel, the three-lane highway.

Traffic engineers concluded that any road carrying more than 4,000 vehicles a day should be wider than two lanes. But how wide? Thirty feet? Forty feet? Here the engineers differed, but agreed that the ideal for such heavy traffic would be a four-lane road with center separation.³

³ SRC 1931-34, page 15.

In Maryland a number of three-lane or 30-foot roads were built, but only as a temporary expedient or "stage construction" until wider roads could be obtained. The engineers recognized from the first the inherent danger of the third or middle strip used for passing.

Among the early roads scheduled for widening to three lanes were Rockville Pike (U. S. 240), the National Pike between Catonsville and Ellicott City, eliminating a reverse curve known as Devil's Elbow (U. S. 40) and the Bel Air Road between Joppa Road and Bel Air (U. S. 1).

Today the three-lane road survives only in short strips on mountainsides where the right-hand lane is reserved for slow-moving traffic going upgrade, an example of which is Sideling Hill relocation in Washington County.

NINE-FOOT ROADS

An outstanding example of getting as much paving as possible for the least cost was Kent County's experiment with nine-foot concrete roads, built in 1930 by the Roads Commission for the County at its expense. Even in passing, at least two wheels were on hard surfaces in wet weather. Fifty miles were built in one year. The project was widely copied outside the State.⁴

SALISBURY BYPASS BECOMES A CITY STREET

By 1934, in the process of widening busy thoroughfares to 30 and 40 feet, the Commission had discovered the economy as well as the efficiency of building entire new road sections on new locations around congested areas.

In widening the Baltimore-Washington Boulevard to 40 feet, for instance, it was found that in "certain developed sections property damages incident to acquiring rights of way for the additional width were so costly that it was actually cheaper to build an entirely new 40-foot road on a new location than to widen the existing road from 20 to 40 feet."⁵

Thereafter, the Commission constructed a number of short relocations circumventing busy traffic centers. The first major bypass so built was the relocation of U. S. 13 around Salisbury. It provided a 56-foot roadway between curbs and the Commission predicted "it will relieve the present congested traffic conditions on U. S. 13."

At that time limitation of access was little known and less practiced. So what the Commission unwittingly did was to build a new street for Salisbury.

⁴SRC 1927-30, page 79; Records in the Maryland files (1930), Bureau of Public Roads, Washington, D. C.

⁵SRC 1931-34, page 16.

Main Street merchants moved out to the bypass, creating new congestion there and a near-blight downtown. Today, the relocation of U. S. 13 is built up almost solidly with stores and factories on each side of a wide urban boulevard. The traffic advantage of the bypass is entirely lost.

A bypass of the bypass is clearly indicated for the future, this time with control-of-access features.

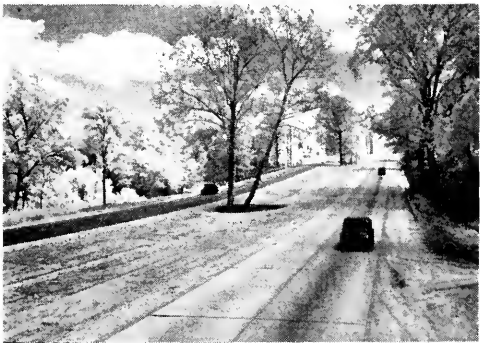
NEW ANNAPOLIS BOULEVARD BEGINS

Construction of a new dual highway from Baltimore south to Annapolis was commenced in 1934. The first contract, three miles southward toward Furnace Branch, consisted of two 20-foot roadways separated by a six-foot median strip. It was built along the old road alignment at a cost of \$90,000 a mile.

SAVING THE OLD TREES



These two pictures graphically point up the Commission's policy of saving trees on roadsides and center strips. The photos show sections of the Baltimore-Annapolis Boulevard.



The first attempt by the Roads Commission to brighten up the highways with trees and shrubs came in the early Thirties.

Before 1934 it had been the common practice of highway contractors, before starting work on a new project, to clear the right of way of every tree and bush in order to have room to maneuver their equipment. On the new Philadelphia Road, for instance, all trees in the median strip were first removed; then after the road was finished, young saplings were planted to take their places.

On the new Annapolis Boulevard the same practice was begun as the road was dualized south from Glen Burnie. But from Jones Station south to Annapolis the trees already growing in the center strip were retained.

The difference is distinctly noticeable, even today. The heavy

foliage from the ancient trees on the Annapolis end of the road stands out in sharp contrast to the twenty-year saplings on the northern portion.

This happy circumstance is due to an alert young road inspector named William T. Claude. Sensing the folly of cutting down old trees only to replace them with new, Claude pleaded with his superiors for a change of policy that would preserve all possible foliage as the new highways unfolded. Since then, every tree that can be saved is spared.

Claude has since become the Roads Commission's official photographer and his friends throughout the length and breadth of the state roads system call him "Scoops."

FIRST MODERN ROADSIDE PLANTING

The first extensive planting of major highways occurred in the Thirties on the new Philadelphia Road and the Annapolis Boulevard.

Since these were then Maryland's show-roads, with grassy malls down the center strips, every effort was made by the Commission and interested private groups to beautify the roadsides.

Of the Philadelphia Road, Chief Engineer Williar said in 1934: "It will blend into the landscape instead of sticking out upon it like a sore thumb. Changes in the contour of the land will resemble plastic surgery rather than butchery."

In that year \$18,000 became available to Maryland under a Public Works Administration grant for roadside beautification. Williar said the entire sum would be invested in planting on this one highway.

Earnest appeals were made to commercial interests to keep the new highways free from billboards and at first these efforts were successful. However, as time went on, both of these highways began to build up with marginal services. This was especially true of the new Philadelphia Road, which was christened Pulaski Highway.

In 1940 a traveler noted on the roadside a rifle-range, a children's playground, many restaurants, dance halls, bars and a menagerie containing three monkeys and two bears.

On the Annapolis Boulevard he found the State's first, and at that time only, open-air movie which advertised performances every night "rain or moon."

In the face of such competition, interest in flowering shrubbery noticeably withered.

Controlled access would have prevented this condition. But the time for this essential innovation had not yet come.

NEW COMMISSIONER

In the summer of 1934 two vacancies occurred in the membership of the Roads Commission. Chairman Uhl died in office and E. Brooke Lee resigned.

The Governor left the chairmanship vacant but filled the other post by appointment of State Senator William D. Byron, a Washington County industrialist. Byron remained on the Commission nine months.



The Annapolis Boulevard was completed in the Nice Administration. This is a section near Arnold.

Chapter XII

SLOW-DOWN IN CONSTRUCTION

The administration of Governor Ritchie closed with the year 1934 after fifteen years of feast and famine for Maryland, as for all America.

The prosperous years of the Twenties had ended in the stock market crash, and one of the country's worst depressions. Banks were closed, factories were idle and businessmen sold apples in the streets.



Dr. Tabler

The new state administration in 1935 was headed by Governor Harry W. Nice.

For the chairmanship of the Roads Commission the Governor chose Dr. Homer E. Tabler of Washington County.

The second appointment went to C. Nice Wilkinson of Cumberland. The minority membership went to Frank F. Luthardt, a lawyer, of Baltimore.

NATHAN SMITH NOW CHIEF ENGINEER

The 1935 Commission promptly appointed a new Chief Engineer, Nathan L. Smith, who had cut his eye-teeth with the Roads Commission back in 1912 and had been a Baltimore City Highway Engineer since 1927.



Mr. Smith

Smith served as acting Chairman of the Commission during the first four months of 1935 while the Governor was pondering his permanent appointments.

At the close of his term he became a consulting engineer and later chief engineer of Baltimore City. In 1947 he became Chief Engineer of Baltimore County and in 1951 Director of Public Improvements of Maryland. He died in 1955 at the age of 66.

Dr. Tabler remained in office 38 months during a period of varied problems, chief of which was a tie-up

of federal funds in Washington. Because of right-of-way and other difficulties, the Roads Commission was unable to get many of its important projects approved.

Beginning in 1933 and continuing throughout the Nice administration, the Legislature had diverted certain motor vehicle revenues to the general fund in a desperate effort to balance tight budgets in the lean years. The depression itself reduced automobile driving which in turn was reflected in lower motor vehicle revenues. All these difficulties further darkened the financial picture of the roads unit.

In 1938 Dr. Tabler resigned to resume his medical practice.

NEW CHAIRMAN

In the meantime, Commissioner Wilkinson had died and was succeeded in the spring of 1938 by J. Glenn Beall who had been a member of Allegany County's roads board.



Mr. Beall

Governor Nice promoted him to the chairmanship in the summer of 1938.

Beall, who was 42 years old at the time, rounded out the Nice administration to become Congressman from the Sixth District. Since 1952 he has been a United States Senator.

When Beall became Chairman, the position he vacated as a member was filled by Elmer R. Jarboe, a St. Mary's County highway contractor. He disassociated himself from his firm and served out the last months of the Nice administration.

George F. Obrecht, Sr., of Baltimore, served on the Commission a few months in 1938 and 1939, succeeding Frank Luthardt.

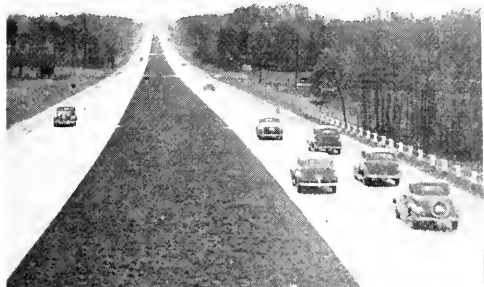
THE ROADS SYSTEM INCHES ONWARD

In 1935 the great new dual highway from Baltimore to Frederick was planned and work was started. Designed on new location, this highway was an extension of Edmondson Avenue in Baltimore and bypassed both Catonsville and the narrow, crooked streets of ancient Ellicott City. It was graded and drained as far as Pine Orchard in Howard County and a new bridge built over the Patapsco. By the end of 1938 one lane had been paved for a distance of 3.6 miles.

The road is now U. S. 40 west of Baltimore.

The Annapolis Boulevard was completed in 1938 as a dual highway from Baltimore and named in honor of Governor Ritchie who died in 1936.

The new Philadelphia Road, now U. S. 40 east of Baltimore, was completed as a modern dual highway to Havre de Grace. Plans were drawn for a new Susquehanna Bridge and for the continuation of the dual road to the Delaware line. Work on the Salisbury bypass continued and State Route 5 in Charles County was rebuilt.



BEFORE AND AFTER. A view of the new Pulaski Highway (U. S. 40) when completed in 1938. The lower photo shows old Philadelphia Road which it supplemented.



A total of 150 other grade crossings in the State system were still to be eliminated.

GRADE CROSSINGS ARE REMOVED

The elimination of railroad grade crossings, begun in the Twenties, continued on schedule during this period. By 1938 a total of 67 overpasses or underpasses had been built and three crossings had been by-passed by road relocation.

However, four of these structures had already become obsolete because of the suspension of service of two rail lines, the Chesapeake Beach Railway and the Washington, Baltimore and Annapolis Railroad. Furthermore, many of the early bridges built in this program were, by 1938, found too narrow.¹

¹Preliminary Report of the State Highway Planning Survey (1938), page 31.



The planners of the Thirties foresaw the expressways of the Fifties.

Chapter XIII

THE PLANNING AGENCIES—BLUEPRINT FOR THE FUTURE

The first road-building program of the Roads Commission was handed to it by the 1908 Legislature. It was to build a system of roads that would connect all the county seats and get the job done by 1915.

This seven-year plan was executed on schedule, as noted in Chapter V.

Other programs have not fared so well. In the Thirties and Forties there were a four-year plan, a five-year plan, a ten-year plan and a twenty-year plan.

The current trend is toward less periodic programming and more continuous planning with sights set ahead on the reasonably foreseeable traffic needs of twenty or thirty years.

THE WOLMAN REPORT

One of the first agencies to cast a critical eye at the road picture was the Maryland State Planning Commission which called for a ten-year program to rebuild Maryland's primary highway system between 1935 and 1945.¹

Under the chairmanship of Dr. Abel Wolman of Johns Hopkins University, and aided by Roads Commission data and personnel, this group found the secondary roads of the State generally too advanced for the traffic they carried and the principal roads too retarded.

The Roads Commission, the report declared, had followed a policy of recognizing "sectional groups" each of which wanted extensively paved roads in its own locality. As a result, there were hundreds of miles of excellent pavement on the lightly-traveled byways of the State.

By contrast, it found that the primary system was totally inadequate for modern high-speed traffic.

It pointed out that the early Roads Commissions had merely paved over the wagon trails of antiquity and had not planned a system "on a basis

¹ State Planning Commission Reports (March 1935)—Ten Year Highway Program of Maryland.

of anticipated traffic volumes and lines of flow"; and that even up to 1935 this policy persisted except for minor revisions in widening and surfacing.

TOPSY-TURVY ROADS?

The Planning Commission cited as an example of bad planning the Defense Highway (U. S. 50) built between 1920 and 1926. It said: "It was adequate only for the traffic at the time it was built; almost at once it was found exceedingly unsafe."

Pointing out other "examples of waste" because of lack of foresight, the Commission called for a complete rebuilding of the primary system largely on new location. It did not discuss the question of financing the new construction.

THE ROADS GET SCIENTIFIC TREATMENT

The most thorough check-up given the ailing roads system was the four-year study made in the late Thirties by the State Highway Planning Survey headed by Clarence P. Taylor, a Massachusetts traffic engineer called in to diagnose the patient.

This group had a budget in excess of \$200,000 and employed over 100 persons² to give Maryland's roads the most complete going-over they had ever had.

It was one of 46 other surveys conducted throughout the country by the highway departments in cooperation with the federal Bureau of Public Roads.

Taylor's principal assistants were William F. Childs, Jr., Road Inventory Manager; George N. Lewis, Jr., Traffic Survey Manager; and William P. Walker, Financial Survey Manager. Both Childs and Lewis were Roads Commission personnel; Walker was a tax expert on loan from the University of Maryland. When Taylor left in 1938 Childs headed the Survey with the title of State Manager. Their work was finished in late 1940.

RIDING A STADIA ROD CAR

The Highway survey started out by making an inventory of every mile of every public roadway in the State, checking surface, width, condition, grades and alignment of each section.

To accomplish this they organized twelve parties, each containing three men and a specially-equipped automobile called a stadia rod car, carrying cameras, telescopes and equipment for measuring degrees of curvature,

² SRC 1939-40, page 77.

grade of hills, sight distances and the like. This procedure was standardized by the Bureau of Public Roads.

One result of the inventory was the preparation of a series of county maps showing all public roads in each county. These maps have been kept current and the latest edition of each is available today.

The survey parties also rated all bridges in the State and computed estimates of replacement costs in case of future damage or destruction.³

HOW MANY CARS ON THE ROADS?

A full-dress traffic survey was made, checking volume, character and density. For instance, it showed that in 1936 motor vehicle owners traveled over three billion miles on Maryland roads and streets.

Traffic counts showed travel conditions on all roads, including the weight of the vehicles; and information was gathered to determine the character of future roads and the type of construction needed to carry the weights discovered.

Such procedure is standard today but was novel in the Thirties. It was the first attempt to put road location and design on a scientific basis.

The early road builders played the game pretty much by ear.

ORPHAN ROADS

One of the unusual features turned up in the investigation was the mileage of public roads claimed by nobody and maintained by no public agency.

The Survey reported it had found 1,238 miles of roads open to unrestricted public use but for which no public body accepted responsibility. About 100 miles were in unincorporated places and special taxing areas, mostly built by real estate developers. Some 76 miles were built through State forests and parks by the then defunct Civilian Conservation Corps, a Roosevelt depression agency.

However, a good thousand miles of such unclaimed or orphaned roads were spread throughout the Maryland counties, consisting of unimproved or primitive roads which were barely passable, of graded and drained roads and also of surfaced roads no longer used and not maintained by any county.⁴

The surveyors also reported "lost roads"—stretches which appeared as lines on maps but could not be physically located. In one such case a section of 16-foot gravel road was found in a field overgrown with weeds

³ Preliminary Report of the State Highway Planning Survey (1938) pages 5, 6.

⁴ Preliminary Report, *supra*, page 37.

and brush. A new location had been built around it some distance away and the old road no longer used.⁵

NEEDS OF THE FUTURE

From the studies extending over four years came a voluminous document which the Roads Commission submitted to the 1941 Legislature. It was entitled "Maryland Highway Needs, 1941-1960" and was signed by William F. Childs, Jr., State Manager of the Survey.

It presented a five year plan for immediate needs to cost \$55,272,000 and a twenty year plan of full modernization to cost \$216,947,000.

It was an eye-opener for the legislators and the public generally, for nothing like it had ever been produced before.

It also was a model for other states, since Maryland was the first of the states to complete and publish the results of its Survey—another Maryland first.

The Survey had found a total of 18,127 miles of roads in Maryland, more miles of road per square miles of land area than in any of 44 other states. Of this mileage, 4,057 was in the state road system; the rest was county, municipal and unclaimed roads.

ROAD DEFICIENCIES LISTED

Using national standards adopted by the federal Bureau of Public Roads, the Survey coldly listed deficiencies in the state network: 5,911 curves too sharp for safety, 1,438 grades of more than five percent in non-mountainous country, 16,113 places where the sight distance was less than the prescribed 500 feet, 145 grade crossings of railroad tracks, 400 bridges too narrow for the traffic they carried, 13,957 miles of roads of all types under twenty feet in width and 7,613 miles of roads inadequately surfaced, or not covered at all.

It further found many roads with stub-ends leading nowhere, 900 miles over-developed for the light traffic they carried and 860 miles under-developed for bearing heavy traffic.

For Maryland's highways carrying more than 5,000 vehicles a day the minimum standards called for dual highways on a 200-foot right of way with 24-foot divided pavements and ten foot shoulders.

The Survey said that only one road in the state carrying such traffic measured up to minimum specifications, U. S. 40 east of Baltimore—then just completed.

⁵ Baltimore *Sun*, July 16, 1938.

It did not list specific roads to be improved on a priority schedule. But it did come up with a method of financing which included increasing the tax on trucks. It said "truck owners are not paying their proportionate part of the highway cost but are being subsidized by passenger car owners."

The report was referred to as "the most exact analysis of the State's highways, as they are and as they should be, that has ever been made."⁶

PLAN PIGEONHOLED BY WAR

But nothing immediately came of it.⁷ In 1941 highway thinking was in terms of defense highways and access roads to industrial plants making tools for fighting.

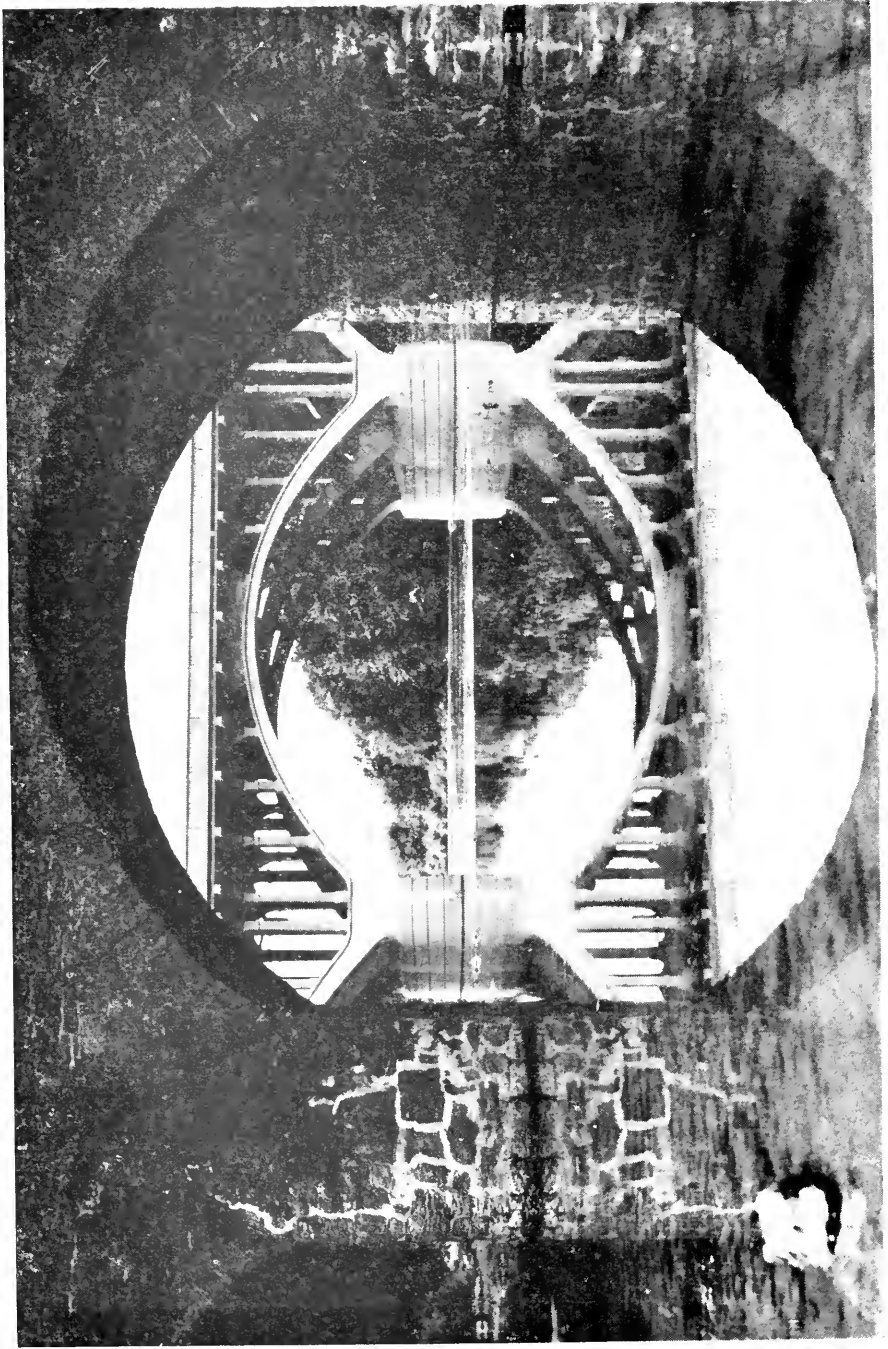
The War was just around the corner.

In the meantime, a program of bridge construction had been devised and plans prepared for a system of new toll bridges.

This important phase of Maryland road-building will now be examined—preceded by a preliminary glance into the past at Maryland's fine bridges of an earlier era.

⁶ Baltimore *Evening Sun*, February 7, 1941.

⁷ Other investigations also were made in these years in an effort to determine what was wrong with Maryland's road picture. See "Highway Betterments 1937," a publication of the State Roads Commission, presenting an inventory by district engineers and a \$48 million modernization program; and "Report of the Highway Advisory Committee" to Governor Nice, February 9, 1937.



The 1936 open spandrel concrete bridge crossing the Conococheague River west of Hagerstown is seen through an arch of the old stone masonry structure built as a tow-pike stream crossing in 1819. (See page 125).

Chapter XIV

SPANNING THE EARLY WATERWAYS

Maryland is a geographical paradox. It is cut in two by a great bay which once was a boon to travel but now is a barrier.

Maryland is a small state, at one point less than two miles wide, yet parts of Garrett County are farther from Baltimore than the State of Connecticut.

Except for the Great Lakes states, Maryland has more water area than any state in the union. Of 12,300 square miles in the State, 2,400 are water, or twenty percent.

Both the Chesapeake and the Potomac are fed by hundreds of streams that interlace every corner of the State. It is hard to drive ten miles in Maryland without crossing water.

The Roads Commission in its struggle to provide smooth motoring is constantly building, rebuilding and repairing bridges. There are 1,177 bridges of twenty feet or more in length on the state system, with countless others on the local roads.

THE FERRIES

Yet before there were any large bridges there were the ferry boats.

Early Maryland probably had more ferries than any colony on the continent. On a trip from Annapolis to Elkton there were ferries over the Patapsco, the Gunpowder, the Bush and the Susquehanna. By 1748 there were no less than 15 ferries across the Potomac between Maryland and Virginia.¹

Some ferries survive today such as White's Ferry over the Potomac upstream from Washington and the picturesque Oxford-Bellevue Ferry in Talbot County. The most notable ferry system of recent times was the Chesapeake crossing which retired into the wings of yesterday with the bridging of the Bay in 1952.

¹ Geological Survey Reports, Vol. III, page 128.

WOODEN BRIDGES

The earliest bridges in this country were simple wooden beams to which a flooring was nailed. They were built as short as possible, timber spans extending from bank to bank.

Since nature had cut streams well below the surrounding terrain, in many places this meant precipitous grades on both sides. One of the early complaints of the traveler was the steep approaches to the little bridges.

Crossing the larger streams were found bow-trussed bridges with heavy curved upper chords built up from planks bolted together. To protect some of these bridges from the weather a covering of light boarding completely enclosed the whole superstructure.² Thus they were called covered bridges.

A few of the covered bridges are still in use in Maryland and are curiosity pieces. Automobile clubs show their location on maps and direct tourists how to reach them.

An aura of romance has grown up around them: legend has it they were covered to favor the younger generation, similar to the "tunnels of love" of early Twentieth Century amusement parks. However, they were thoroughly utilitarian.

STONE ARCH BRIDGES

No stream crossing was a finer example of hand-built sturdiness than the stone-arch bridge of the early Nineteenth Century; and no State had more conspicuous examples of this ancient art than Maryland.

The Chinese are said to have originated the principle of arch construction about 2000 B.C. The Egyptians, the Romans and the Incas were early developers, both in bridges and viaducts. The arch is as old as civilization.

The Romans transplanted the principle to Britain where many fine examples of this type of bridge architecture have survived the centuries. In this country some of the most elaborate of these bridges are found in this State, each stone hand-cut and hand-placed with the deftness of a surgeon using his scalpel.

The Baltimore and Ohio Railroad in its westward movement chugged over many stone-arch bridges. The Thomas Viaduct just west of Baltimore is one of the classic examples of stone-arch construction. Built 125 years ago it is still in daily use. But the B. & O. was merely following in the footsteps of the builders of Maryland's turnpikes.

² *Ibid*, page 206.

JUG BRIDGE. One of the earliest examples of stone-arch construction was the bridge across the Monocacy River east of Frederick. Containing four arches of hand-cut native stone, this bridge was built in 1809 by the Baltimore-Fredericktown Turnpike Company as part of its toll road to the west. The bridge was decorated at its eastern end with an inscribed monument in the form of a huge demijohn or jug, from which the bridge took its name.

Local legends have it that the jug was filled with whiskey and sealed at the time it was built, or that a bottle of whiskey was placed in the jug by the builder, or that a quantity of whiskey was hidden in the jug by Civil War soldiers.³

General Lafayette stood on the bridge and addressed a delegation of Frederick citizens on his last visit to Maryland in 1824.⁴

In 1939 it developed "staggers" and its arches were strengthened. But three years later, twenty feet of the bridge fell into the river and it was never rebuilt. However, a temporary bridge was placed in service until a new and modern concrete arch bridge was completed by the Roads Commission a short distance down stream in 1945.

The ruins of the old masonry abutments still remain, including the famous jug on its eastern approach.

In the dualization of U. S. 40 a third bridge was built at this site in 1955. It is longer and much higher than the second, to avoid the steep up-grade which the Monocacy has cut through the Catoctin foothills. This new bridge is now the east-bound lane of the transcontinental highway.

Thus at this one point, standing silently side by side, may be seen three examples of distinctive Maryland bridge architecture.

CASTLEMAN RIVER BRIDGE (also spelled Casselman). This 80-foot single span was the largest stone arch in America when built in 1813 by the Federal Government as part of the National Road west of Cumberland. Located near Grantsville in Garrett County, this bridge was in continuous use for 120 years. It was closed in 1933 when a new concrete and steel structure was erected by the Roads Commission to give better alignment and a wider roadway.

The huge arch of the old bridge was so unusual at the time it was built that many citizens shook their heads and predicted it would fall as soon as the supports were removed. This apprehension was so general that the contractor's confidence in his own work was undermined. To avoid embarrassment on the day of the formal opening, he slipped out secretly

³ Frederick Public Library.

⁴ Frederick News, March 4, 1932.

the night before and removed the arch-support timbers, discovering that the bridge stood "as though created from solid stone."⁵

The Roads Commission early appreciated the need for preservation of these old bridges. In its 1911 report it said: "This Department (Engineering) has begun the saving of the old stone arches and similar structures existing on these former turnpikes. Many of these are important and valuable both physically and historically."⁶

It found the Castleman Bridge "dangerously out of repair" and proceeded to put it in first class condition by pointing up the stone work, rebuilding its solid guard wall and decorating the rail with a concrete cap, a modern touch in 1911 not anticipated by the old bridge's stone masons.

The bridge is still standing in an excellent state of preservation a few hundred feet upstream from its modern successor.

WILLS CREEK BRIDGE. This was a stone arch example consisting of two 60-foot spans of such unusual design that it is frequently referred to in modern treatises on this type of bridge. It was part of the recon-



The bridge over Conococheague River, west of Hagerstown.

⁵ The Highway Magazine, June, 1938; September, 1957; Garrett County Centennial History 1849-1949, Sincell Press, Oakland, Md. (1949), page 4.

⁶ SRC 1908-12, page 80.

struction of the National Road at Cumberland in 1835. A modern concrete arch structure was built in 1932, but the old bridge was allowed to stand. It was later removed as part of the Cumberland flood control work conducted by the United States Army's Corps of Engineers.

WASHINGTON COUNTY BRIDGES. There were more stone-arch bridges built in Washington County than in any other part of the State. It is said that at one time there were fourteen such structures over one stream alone—historic Antietam Creek. This was an average of one bridge every two miles. Many are still in active use.

The largest in the county was the Conococheague bridge built in 1819 as part of the turnpike from Hagerstown to the west bank of the Conococheague River. A structure of exceptional grace and beauty, this limestone bridge still stands in good condition and is used for local traffic.⁷

It was replaced in 1936 by a modern structure, a triple span, open spandrel, reinforced concrete arch bridge with a 44-foot roadway. The new bridge stands a hundred yards downstream from the old, affording the observer an excellent on-the-spot comparison of nineteenth and twentieth century bridge architecture.⁸

The influence of the old stone-arch bridge was noticeable in the construction of stream crossings on relocated U. S. 40 between Frederick and Hagerstown, built in the mid-thirties. Many of these are faced with granite to simulate the old bridges of the County, the largest of this type being the crossing of Antietam Creek near Hagerstown.

IRON BRIDGES

Cast-iron for bridge construction was introduced into the United States from England in the 1830's.

The first such structure was built at Brownsville, Pa. as a part of the reconstruction of the National Road by the Federal Government. Both the design and the plans were prepared by the young West Point engineers who had charge of this work. It consisted of nine cast-iron hollow elliptical sections bolted together.⁹

This principle of bridge construction was soon adopted in Maryland because of the many iron deposits found here. One of the earliest was the Dover bridge across the Choptank between Caroline and Talbot counties.¹⁰ Another crossed the Potomac at Brunswick in Frederick County.

⁷ The Highway Magazine, June, 1938; September, 1957.

⁸ SRC 1935-36, page 51.

⁹ Public Roads of the Past (Historic American Highways), a publication of the American Association of State Highway Officials, Washington (1953) page 65.

¹⁰ Geological Survey Reports, Vol. III, page 206.



The old iron bridge over the Susquehanna River at Conowingo. It was destroyed to make way for the artificial lake above Conowingo Dam in 1926.

THE BRUNSWICK BRIDGE. Built in 1892, this extremely heavy bridge was 1,770 feet long and constructed entirely of wrought iron. It rested on steel columns which in turn stood on the old masonry foundations of an earlier bridge. Fifteen feet wide, the flooring was of timber joists and planking.

This dangerously narrow bridge was removed in 1955 to make way for a modern concrete and steel structure 2,400 feet long and costing \$2,500,000, which not only spanned the river, but the Chesapeake and Ohio Canal, the Brunswick yards of the Baltimore and Ohio Railroad and part of the town as well.

Brunswick has run the gamut of Maryland stream crossings. Ferries operated before 1856 when a covered wooden bridge was built on stone masonry piers. In 1861 General Lee destroyed the bridge and McClellan built a pontoon bridge to take his Army of the Potomac into Virginia. Then came the iron bridge and now the one of concrete and steel.¹¹

EARLY ROADS COMMISSION BRIDGES

Since the turn of the Century bridges have been built of steel and later of steel and reinforced concrete.

¹¹ Records of the Brunswick Board of Trade.

Those crossing navigable streams were built with movable spans providing channel openings. Most of the later bridges have been constructed high enough to afford full clearance for the largest ships and thus require no movable spans.

The first bridge built by the State Roads Commission was a steel crossing of the Nanticoke River at Sharptown between Dorchester and Wicomico counties. Erected in 1910 as part of a special legislative appropriation, it was 651 feet long and cost \$72,539. It had a draw span of the swinging type operated at first by hand and later by electric motor. It still serves modern traffic.

HANOVER STREET BRIDGE. The largest early bridge constructed by the Commission was the Hanover Street Bridge in Baltimore, completed in 1917. It joined the city with Brooklyn, then in Anne Arundel County.



THE OLD AND NEW. The narrow iron bridge at Brunswick (upper right) was supplanted in 1955 by the modern one shown in the center photo. A close-up of traffic using the new bridge is depicted at lower left.

This crossing of the Patapsco is one of Baltimore's early and historic travel routes. Before the City was founded, both a post route and a stage crossing used this site, the passage being made in the eighteenth and nineteenth centuries by a succession of private ferries.

A private toll bridge was built of timber in 1856 at the foot of Light Street and in 1880 was purchased jointly by the City and County. The 1914 Legislature directed the Roads Commission to build a new bridge and the Hanover Street location was selected.

The structure was built of concrete on wooden piles driven from 75 to 100 feet below the surface. Its overall length from the foot of Hanover Street to First Street in Brooklyn is 1.6 miles. It contains a bascule span with 150 foot clearance. It was built at an overall cost of about \$1,200,000.

Within its fifty-foot roadway, flanked by two eight-foot sidewalks, space was provided for a double-track streetcar line.

This was the most imposing piece of work the Commission had undertaken since its creation, as it involved the largest reinforced concrete



First vehicle to pass over the Hanover Street Bridge, Baltimore. Built by the State Roads Commission—1914-15-16-17. (1) Governor Harrington, (2) Chairman Zouek, (3) Chief Engineer Shirley, (4) State Treasurer Dennis, (5) Anderson (Star), (6) Brattan (American), (7) Harman (News), (8) Gibson (Sun), (9) Wroe (Res. Engr.), (10) Loekard (Secty. to Gov.), (11) Browning (Br. Engr.), (12) Officer McLaughlin, (13) Wilson (Secty.)

highway bridge in the State and one of the most difficult kinds of bridge engineering construction in the country. The type of construction was most unusual in the Middle Branch section since the design was of cantilever construction of so-called umbrella type, which could be erected without the use of falsework.

This bridge remained as the only traffic crossing of the Patapsco in the Baltimore area until the opening of the Baltimore Harbor Tunnel in 1957. The bridge is still structurally sound but overcrowded by the motor cars of the Fifties. Its traffic density, especially at peak hours, clearly calls for another crossing in the years ahead.

OTHER EARLY BRIDGES. Other bridges built by the Roads Commission were the College Creek bridge at Annapolis, the Peach Blossom Bridge over the Miles River in Talbot County and a crossing of the Patapsco at Ellicott City which replaced the 1812 bridge built as part of the early turnpike to the west.

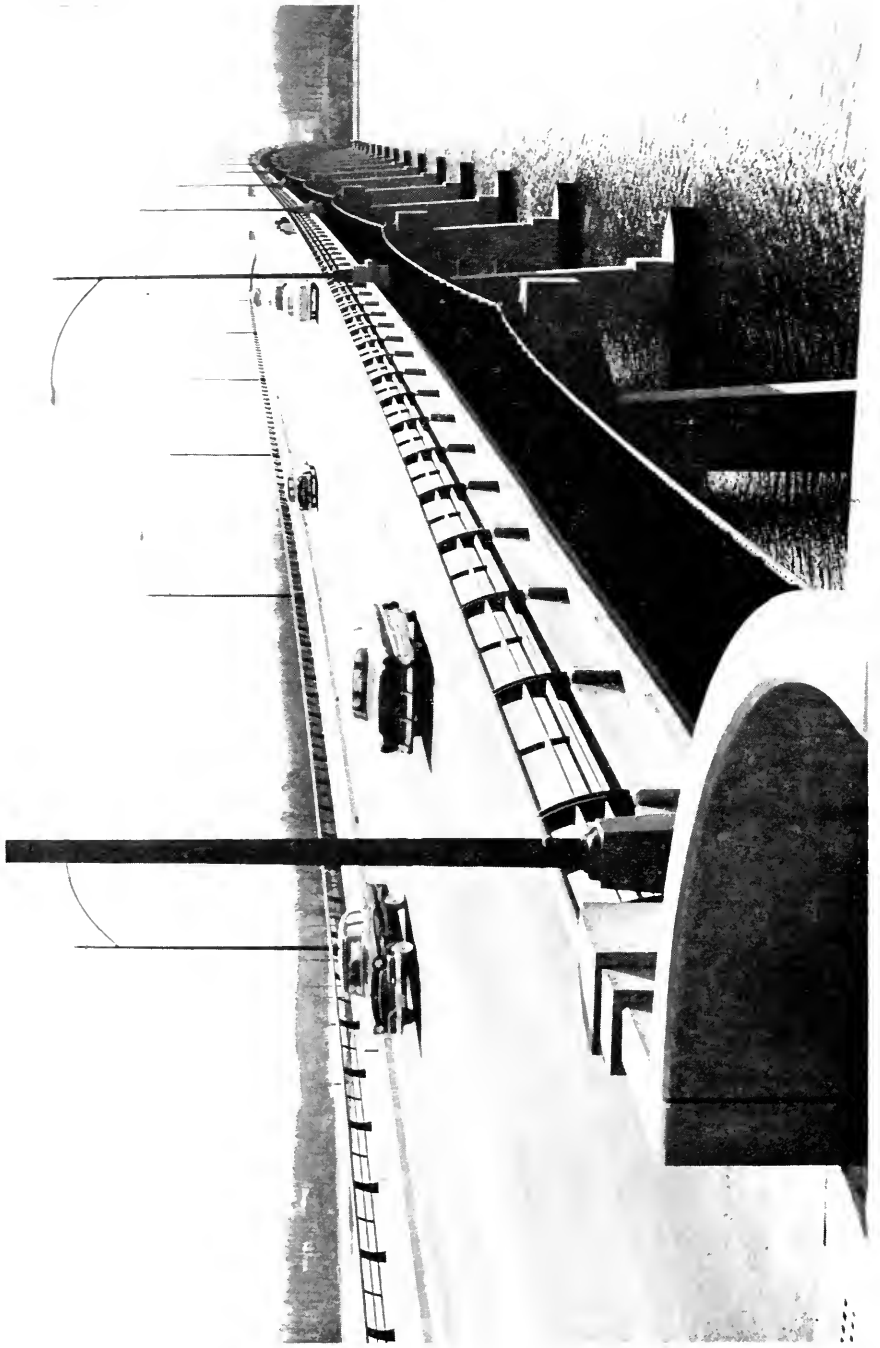
In 1915 the Commission prepared standard plans for all bridges of spans up to 36 feet, thus simplifying the work of the engineers on the smaller bridges.¹²

BRIDGES NOW TOO SMALL

After World War I a general re-appraisal was made of Maryland's bridge system. Like the roads, the bridges were found to be both too narrow and too weak for the ever-increasing traffic. A long-range program of reinforcement and reconstruction was planned which kept the bridge engineers busy well into the Thirties.

This led to the creation of a separate department within the Roads Commission to handle river crossings and other such structures. This new unit of the Roads Commission has for the past 38 years been in charge of bridge construction, including the Primary Bridge Program of 1938 which will be taken up separately in Chapter XVI.

¹² SRC 1912-16, pp. 23; 57, 61, 67.



The new Severn River Bridge at Annapolis opened in 1953.

Chapter XV

MODERN BRIDGES

Because of a greatly expanded bridge program following World War I, the Roads Commission set up a separate Bridge Division in 1920. Walter C. Hopkins was named its first Bridge Engineer.

He served in this capacity until 1948 when he became Deputy Chief Engineer and in such position has acted for the Engineering Department of the Commission in the construction of both the Chesapeake Bay Bridge and the Baltimore Harbor Tunnel Throughway.

Hopkins was one of the pioneer men in the Roads Commission family, having joined the organization in 1914 as a draftsman. He designed or supervised all the stream crossings for 28 years and also handled the grade crossing elimination program authorized by the Legislature of 1927.

Since 1948, one of Hopkins' assistants, Albert L. Grubb, has been the Bridge Engineer.

One of the first bridges built by the new department was a concrete structure at Pocomoke. Construction is now in progress to supplement it by a new 35-foot vertical-clearance fixed span as a part of the Pocomoke Bypass.

A system of timber jetties protecting the Ocean City highway was started in the early Twenties as was a new Severn River bridge at Annapolis.

SPANNING THE SEVERN

The old timber bridge across the Severn had long been a thorn to local traffic. It had been in use in one form or another since the close of the Seventeenth Century.

One of the Roads Commission's early acts was to take over this bridge in 1912 for state maintenance. It was in bad shape, narrow and dangerous. A new structure was clearly indicated.

After the war a "roads and bridges fund" became available and the long-delayed Severn crossing was built of concrete and steel, 1,850 feet long, with a 22-foot roadway flanked by two sidewalks. Costing \$800,000,

it was the finishing touch to the Baltimore-Annapolis Boulevard, completed in 1915. It is still in active use although over-shadowed by a new bridge upstream which is part of U. S. 50.

The opening of this Severn bridge in 1924 was the signal for the biggest celebration then known in Maryland highway history. There were bands, floats, parades, speeches and a buffet supper on the grounds of the United States Naval Academy.

REPLACING ONE-WAY BRIDGES

One of the most pressing problems of the Commission's early years was the replacement of many of the single-lane bridges built in the Nineteenth Century—timber structures so narrow they accommodated but one line of vehicles at a time.

First priority was given to rebuilding these structures and by 1926 the Commission was able to announce that the traveler now could drive from Baltimore to the West Virginia line near Oakland, "a total of 200 miles, without a single one-way bridge in its entire length, indeed a most satisfactory result, and as far as known, the only highway of this length with such a status."¹

THE GOLD MINE BRIDGE

The crossing of the Susquehanna at Havre de Grace deserves special mention. Now a part of U. S. 40, this is one of the historic stream crossings of the State. A succession of ferries made the trip for two hundred years and it was not until 1910 that a vehicular bridge was opened.

The Pennsylvania Railroad had built a single track wrought-iron bridge across the river in 1873. By 1904 the railroad replaced it with a new one and offered the old bridge to any public or private agency that would take it, to avoid the cost of removing it. The authorities of both Cecil and Harford counties turned down the offer.

However, a group of seven citizens of the two counties accepted the gift on condition that the railroad convert it into a highway bridge. Among this group were Murray Vandiver, former State Treasurer, Thomas H. Robinson, who became Attorney General, Michael H. Fahey and Omar D. Crothers, who later served on the Roads Commission. Each put up \$100 to get the project started.

The private owners charged a graduated toll beginning at sixty cents for passenger car and driver. Between 1910 and 1923 they netted

¹ SRC 1924-26, page 59.



The old Susquehanna River Bridge on U. S. 40 which was double-decked in 1926.

\$370,000 in profits and then sold the structure to the State for \$585,000, a total of \$955,000.

For each dollar they invested, they made \$1,364.

To a generation of Marylanders, this structure was known as the "gold mine bridge." It was in fact more profitable than most gold mines.

The State did not do badly on its investment, either. The Roads Commission took it over at the beginning of 1923 and continued the same rate of tolls. In five years the bridge earned \$1,250,000, enough to pay the purchase price, extensive improvements and all maintenance charges. By 1928 the bridge was free.²

THE GOLD MINE GETS A DOUBLE DECK

Being a converted railroad bridge, the structure was extremely narrow. It had a roadway only thirteen feet wide. For years heavy trucks inch-inched past each other over the 3,300-foot length of the structure. There were many side-swiping accidents and to be safe, traffic moved at a snail's pace.

In 1926 the Roads Commission built a second level or top deck on the ancient structure, converting each level into a one-way run. This was

²SRC 1920-23, page 57; Baltimore *Sun*, January 10, 1923; *Ibid*, October 1, 1928.

considered one of the most ingenious bridge engineering feats of the generation.

In addition to the double-decking of an antiquated superstructure, never designed for motor traffic, the approaches had to be built in such a way that the two lines of opposing traffic would not conflict. The end spans at both Havre de Grace and Perryville were lowered in order to provide easy grades to the new upper level.³

The new deck had a vertical clearance of only twelve and a half feet, barely sufficient for the traffic of the Twenties. By 1938 it was said: "frequently trucks stacked high with freight became wedged between the deck and the overhead structure, making it necessary to deflate the tires to allow the truck to pass."⁴ This, of course, held up traffic on a trans-continental highway.

The need for a new and modern structure was obvious.

EXPERIMENTS IN DESIGN

The Thirties were a period of great activity for the Bridge Division. By 1940 there were 850 bridges on the state system of which more than 250 had been built within the decade.⁵ Of special significance was the great variety of design in an effort to discover the most efficient and least expensive means of spanning Maryland's streams in a period of increasing traffic.

For instance, in building the South River Bridge on State Route 2 in Anne Arundel County, a new method of construction was tried. The sub-structure consisted of concrete placed within steel cylinders, eliminating the use of costly cofferdams. A steel I-beam super-structure with concrete deck afforded a 22-foot roadway while a swing span gave a 70-foot clearance for navigation.

The Bohemia River Bridge built in 1932 on U. S. 213 was a concrete pile trestle type with super-structure of reinforced concrete girders. The Dover Bridge across the Choptank near Easton consisted of three through-truss spans, one of which swung open to provide for an 80-foot ship channel.

Two new bridges of the early Thirties connected important points on the Eastern Shore and formed links in a new and shorter route between the upper and lower counties. One of these was the longest bridge in the state up to that time, the crossing of the Choptank at Cambridge.⁶ It shortened the distance between Easton and Cambridge by 15 miles.

³ SRC 1924-26, page 63; SRC 1927-30, page 129.

⁴ J. E. Greiner Company's Primary Bridge Report (1938), Vol. 1, page 15.

⁵ SRC 1939-40, page 53.

⁶ SRC 1931-34, page 46; SRC 1935-36, page 51.



The bridge across the Sinepuxent Bay at Ocean City.

The other was the crossing of the Nanticoke at Vienna by a 1,016-foot concrete structure built on piling. The eastern approach was a marsh requiring 350,000 cubic yards of fill. The bridge connects Dorchester and Wicomico counties.

The two bridges are now vital parts of U. S. 50 carrying traffic from the Bay Bridge south to Salisbury and Ocean City where a third major bridge on this route was completed in 1941.

The new Ocean City bridge crosses the Sinepuxent Bay upstream from the old structure. Of reinforced concrete, the bridge is 2,300 feet long with a 46-foot roadway to accommodate four lanes of traffic. It connected with a 1942 dual highway that ran west from the Sinepuxent to near Berlin.⁷

During the Thirties, studies resulted in the adoption of several modern types of structures combining economy, utility and appearance. One of these types was the Wichert continuous steel bridge.

A standard design also was adopted for the load limit or carrying capacity of bridges on the primary road system. This design was measured by the weight of a 20-ton truck, a process known as the H-20 loading of the Bridge Specifications of the American Association of State Highway Officials.⁸

FLOOD DESTROYS FOUR BRIDGES

The spring thaw of 1936 caused the Potomac River to rise to unprecedented heights. At Cumberland the water in some places was almost

⁷ SRC 1931-34, page 41; SRC 1939-40, page 54; SRC 1941-42, page 78.

⁸ SRC 1937-38, page 72.

up to second-floor windows and people moved along several streets in rowboats.

Martial law was declared by Governor Nice and National Guardsmen patrolled the stricken area. Serious concern was felt for the City of Washington as the flood slowly moved down the valley of the Potomac. At last it subsided, and the Capital was saved, but not before a number of Maryland's bridges had been washed away or seriously damaged.

HANCOCK BRIDGE. An old toll bridge at this location, purchased by Maryland and West Virginia in 1923, was partially destroyed by the flood. A new bridge was constructed by the two states. A total of 3,168 feet in length, it comprised a series of 20 Wichert-type truss and girder spans and 7 steel-beam spans. Besides spanning the river, the structure crossed the Chesapeake and Ohio Canal, the Western Maryland Railway and the Baltimore and Ohio Railroad, thus eliminating grade crossings.

SHEPHERDSTOWN BRIDGE. A private toll bridge at this Washington County site was washed away by the flood. Maryland and West Virginia built a new steel bridge to replace it, upstream from the old one.

HARPERS FERRY BRIDGE. This structure was completely destroyed by the flood and was replaced by a modern bridge 2,247 feet long joining Sandy Hook in Maryland with Loudon County in Virginia, along U. S. 340.

The building of this bridge was delayed by wartime restrictions and was completed in 1947. In the meantime, for eleven years, the B & O shared its railroad bridge with motor traffic. The State built a wooden floor between the tracks of this picturesque structure and cars, trucks and trains rumbled over it together.

POINT OF ROCKS BRIDGE. This Potomac crossing of U. S. 15, formerly a private toll bridge, was destroyed by the flood. It was replaced by Maryland and Virginia jointly, the plans and engineering work being performed by the Maryland Roads Commission. Of steel construction, it is 1,688 feet long and spans the B & O tracks as well as the river.

These four bridges are in active use today and are deemed adequate for the traffic they carry. The flood hastened their construction by many years.

SRC BUILDS BALTIMORE CITY BRIDGES

During the Thirties the Roads Commission built a number of structures in the City under various arrangements respecting the allocation of federal funds.⁹

⁹ SRC 1931-34, page 48; SRC 1935-36, page 51.

One of the most impressive is the Bath Street Viaduct constructed in 1935. Over 2,000 feet in length, it provides the City with a major east-west traffic artery. It extends from St. Paul Street east to Gay Street and spans Jones Falls and a railroad yard. It contains a 54-foot roadway flanked by sidewalks.

CONSTRUCTION FLOURISHES IN THE POSTWAR YEARS

During the years since 1948, many bridges have been constructed over waterways, highways and railways on the state system.

Among the larger projects were four crossings of the Potomac. The bridge from McCool in Allegany County to Keyser, West Virginia, is a high-level structure spanning not only the river but two railroads and several streets in the towns on both sides of the Potomac.

At Cumberland a new "Blue Bridge" in the heart of the city now supplants the old iron structure. At Kitzmiller in Garrett County a modern bridge has been built in place of an old iron one-way structure. The handsome new bridge at Brunswick in Frederick County has already been described.

A new high-level bridge across the Severn was built in 1953, as part of U. S. Route 50.

Other structures have been built over Tuckahoe Creek between Easton and Denton (State Route 328), over Kent Narrows as part of the east approach to the Bay Bridge, over the Chester River at Crumpton (State Route 290), a long structure at Taylors Island (State Route 16) in Dor-



Cumberland's new Blue Bridge.

chester County and three steel girder bridges over the northwest branch of the Anacostia River in Prince George's County on U. S. 1, alternate U. S. 1 and U. S. 50.

THE PATUXENT TOLL BRIDGE

Ever since the earliest settlements, the broad Patuxent has divided Calvert and Charles counties. Ferries plied back and forth for three hundred years until the State built a bridge across the river at Benedict, the Charles County community where the British landed for their march on Washington during the war of 1812.

The bridge was one of the major structures erected by the Roads Commission during the postwar period. About a half mile in length, it was built of 56 fixed I-beam spans, in addition to a draw span. It was supported by a foundation of concrete pile bents.

The construction and financing of the bridge was provided by a 1949 Act of the Legislature under a \$2,500,000 bond issue upon which the State's credit was pledged.

The bridge operated as a toll structure from the day of its opening, December 1, 1951, until 1955 when it was made a free bridge by a subsequent legislative act.

BRIDGES ACCLAIMED

The variety of design of the Maryland bridges has brought recognition outside the State. In the annual "aesthetic bridge" contests of the American Institute of Steel Construction, Maryland has frequently been honored, the last award being First Honorable Mention in the Class 3 section for 1958—the Shell Road Ramp Bridge at the south approach to the Baltimore Harbor Tunnel.

Chapter XVI

THE CHESAPEAKE BRIDGE AND THE PRIMARY PROGRAM

The keystone of coast-wise travel in Maryland today is a system of three bridges and a tunnel-expressway built and operated by the Roads Commission as a self-liquidating combined toll facility.

Taken together, they offer coastal motor traffic two major routes through the State.

They also relieve traffic congestion on urban streets and rural roads and join sections of the State separated by waterways, thus serving local as well as national interests.

The first of these routes crosses the Susquehanna River Bridge, the Baltimore tunnel thruway and the Potomac River Bridge into Virginia. The second uses the Chesapeake Bay Bridge and the Potomac crossing.

Revenue from the four projects is pledged to secure a \$180 million revenue bond issue payable solely from tolls. The state's credit is not pledged to the redemption of the bonds.

This system of water passages and connecting expressways, so vital to orderly movement of traffic, evolved out of a checkered past of planning, interminable debate and wartime delay.

There was a space of seventeen years between the completion of the Susquehanna Bridge in 1940 and the opening of the tunnel in 1957. Yet long before that, the vision was there; and many men had spent many hours over maps and drafting boards.

THE BAY WAS IN THE WAY

The Chesapeake Bay, long Maryland's principal thoroughfare and major travel route, became in the Auto Age an exasperating impediment to traffic. Ferries crossed the Bay but these were slow and often crowded; sometimes they stopped entirely when there was a heavy fog or ice.

So the first project in a bridge program contemplated a crossing of the Bay.



Maryland's Eastern and Western shores were joined together in 1952 by the Chesapeake Bay Bridge.

As far back as 1907 State Senator Peter C. Campbell of Baltimore told his legislative associates that a bridge might bring to Baltimore the Eastern Shore produce that then was going north to Wilmington and Philadelphia. The following year Baltimore's Merchants and Manufacturers Association appropriated \$1,000 to look into the matter of a privately financed bridge between Bay Shore and Tolchester.

There was talk of a double-deck structure for motor traffic, rail lines and trolley cars; and there were suggestions for crossings between other points. In fact, there was no subject that so captured the imagination of many Marylanders as a long and stately bridge across the Bay.

STOPPED BY THE CRASH

In the late Twenties a group of Baltimore businessmen made the first serious effort to raise the capital to launch the venture as a privately financed toll project. But the 1929 stock market crash put a stop to their planning.

The State took its first formal step to bridge the Bay in 1930. A citizen's committee headed by B. Howell Griswold, Jr., Baltimore investment banker, was appointed by Governor Ritchie to study the feasibility of a public bridge in case private capital did not proceed.

This committee expanded its study to cover the whole area of state waterways and connecting highways. It recommended a state bridge commission to develop a program of toll bridges and tunnels crossing many waterways and shortening travel distances, a commission that would market bonds without pledge of state credit, patterned after the model of the Port of New York Authority.

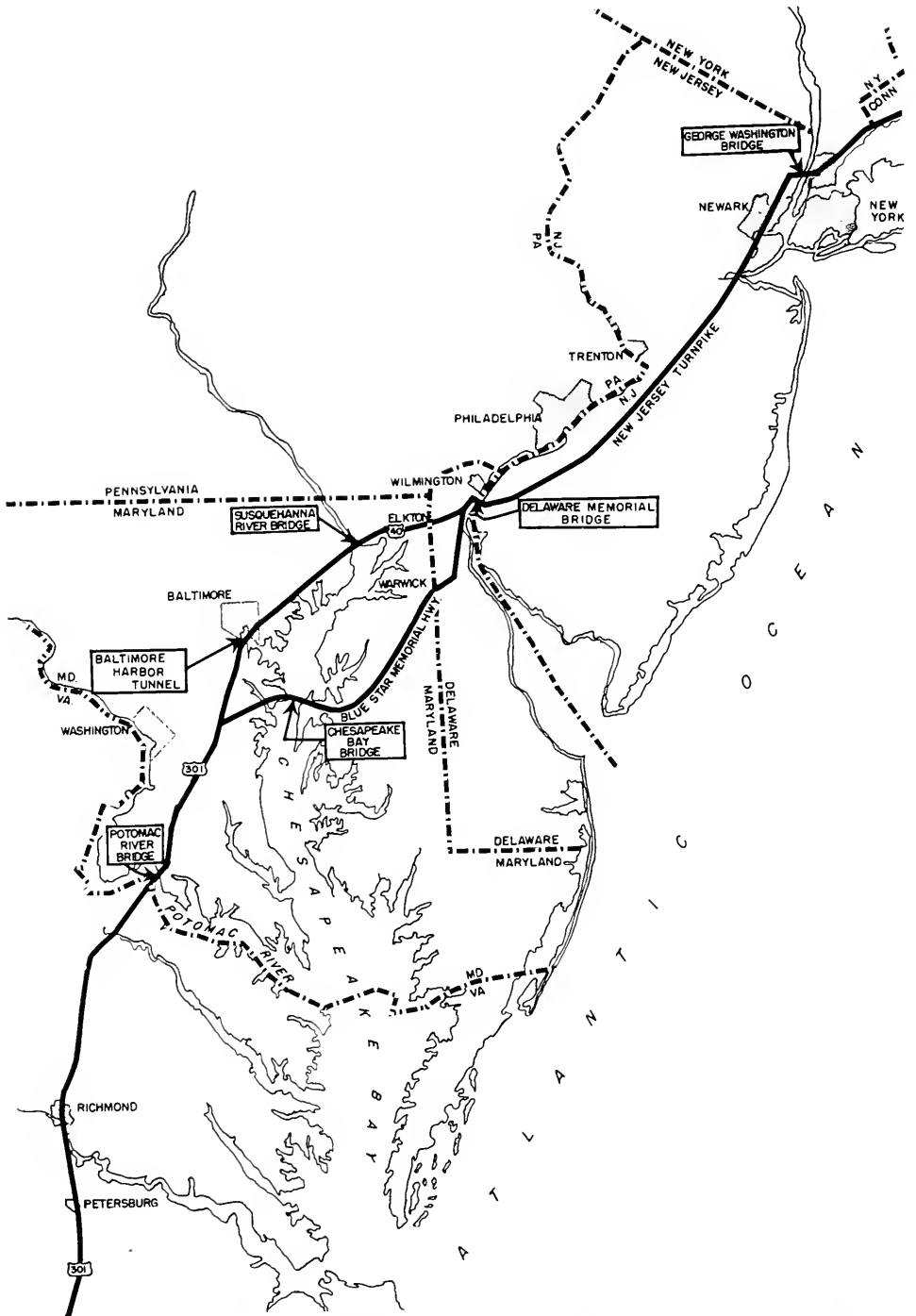
FOUR CROSSINGS EMERGE

During the administration of Governor Harry W. Nice an Act¹ was passed giving statutory authority to the State Roads Commission to formulate a comprehensive plan for the construction of bridges and tunnels financed wholly from tolls.

The plan developed by the Roads Commission, which was ratified by Congress in 1938 under its regulatory powers over navigable streams, came to be known as Maryland's Primary Bridge Program and provided for the following crossings:

- (1) A bridge across the Susquehanna paralleling the overtaxed double decker.

¹ Acts of 1937, Chapter 356.



Completion of the four toll facilities gives Atlantic Seaboard traffic two major routes through Maryland.

- (2) A bridge or tunnel across the Patapsco in Baltimore from the mouth of the northwest branch to Fairfield.
- (3) A bridge across the Potomac near Ludlow's Ferry to the opposite shore of Virginia.
- (4) A bridge across the Chesapeake from (a) Millers Island in Baltimore County to Tolchester or (b) a bridge or tunnel or combination thereof from near Annapolis to the opposite shore of Kent Island.

The 1937 Act of the Legislature also set up a Bridge Supervising Committee of seven citizens headed by Dr. Abel Wolman of Baltimore. This committee possessed full power to approve or veto actions of the State Roads Commission under the statute.

The Roads Commission in 1938, under Chairman J. Glenn Beall, made application to the War Department for approval of the plans and applied for financial assistance from the federal Public Works Administration. It also employed the consulting engineering firm of J. E. Greiner Company to draw plans and make a report.

Greiner was a Baltimorean with a nation-wide reputation in the construction field, having designed many bridges and other structures both in the United States and abroad. In 1938 he was in partnership with Herschel H. Allen, also a Baltimorean, who had obtained his professional start as a bridge designer for the State Roads Commission in 1912.

Greiner has since died, but his firm has continued under his name with Allen as the senior partner. This company has designed and supervised construction of all Maryland's primary bridges and the tunnel, and other related work for the Commission.

BRIDGE, NOT TUNNEL, RECOMMENDED AT BALTIMORE

It is interesting to note that Greiner considered the program in two parts.

Project number 1 was a "national north-south highway" including crossings of the Susquehanna, Patapsco and Potomac, avoiding Baltimore and Washington traffic and cutting travel time and distance between Philadelphia and Richmond. Project number 2 was the Chesapeake crossing between the eastern and western shores, "a necessary link to connect the highway systems of these now divided sections."²

This passage was not envisioned as part of a through travel route in its own right, as it has since become.

²J. E. Greiner Company's Primary Bridge Report (1938) Vol. I, page 2.

Greiner also recommended a bridge rather than a tunnel as a Patapsco crossing. He estimated that at 1938 prices a two-lane tunnel would cost \$15,977,000 while a four-lane bridge would cost \$11,050,000.

These figures did not include elaborate approaches in either case. The plan then was to pick up southbound traffic at Boston and Quail Streets in Canton and deposit it at Patapsco Avenue and Shell Road in Fairfield.³ Baltimore City could widen or build new connecting streets if it so chose.

The Greiner report was prepared during the summer of 1938 and involved a heavy load of engineering spadework. Roads Commission field forces pitched in and helped with tests, borings, plans and traffic counts. A total of 147 surveys were made that summer by the Plans and Surveys Division to help speed the program.⁴

TWO PROJECTS GET THE GO SIGN

The application to the War Department for approval of the four-pronged plan resulted in the green light for the Harbor Bridge, the Susquehanna Bridge and the Potomac Bridge.

The Chesapeake crossing was a delicate issue as it spanned the main ship channel to the port of Baltimore. Approval was deferred pending further study.

The request for aid from the Public Works Administration resulted in grants of 45 percent of the cost of the Susquehanna and Potomac bridges, the balance to be financed by revenue bonds. The P.W.A. took no action at that time on the other two projects.

So the Roads Commission promptly went ahead with the two projects for which the federal authorities had given the go-sign and held the others for later action.

Both the Susquehanna and Potomac bridges were started in 1938 during the Nice administration and were completed before the end of 1940.

NO. I: CROSSING THE SUSQUEHANNA

The dual highway from Baltimore to Havre de Grace, built on new location and carefully landscaped, was completed in 1937. An extension of this modern thoroughfare from Perryville to the Delaware line, bypassing Elkton and overpassing all railroad crossings, was on the drawing boards of the Commission.

The new bridge over the Susquehanna between Havre de Grace and Perryville supplied the missing link in this traffic artery.

³ *Ibid*, page 94.

⁴ SRC 1937-38, page 68.

Coverdale and Colpitts, the New York traffic engineers, estimated that the structure would carry an average of 2,474,000 vehicles per year for the first five years. It actually carried 3,695,000 motor vehicles in its first full year of 1941 and in 1956 carried 8,894,600.⁵

The toll was set at 20 cents for a passenger car and remained at this figure until 1957 when it was raised to 25 cents. The bridge cost \$4,500,000.

NO. 2: THE POTOMAC BRIDGE AT MORGANTOWN

After the Crain Highway was built in the Twenties to connect Baltimore with Charles County a southern extension across the Potomac into Virginia seemed inevitable.

Motorists southbound on U. S. 1, who had just studied in considerable detail the white-step architecture of Baltimore, complained that it took up to an hour to get through metropolitan Washington.

So Crain Highway, now U. S. 301, was extended to the river, Virginia built a connecting road and a beautiful new two-mile toll bridge was built by Maryland across the broad expanse of water which divides North from South.



The Susquehanna River Bridge at Havre de Grace.

⁵ SRC 1941-42, page 325; SRC 1955-56, page 472.



The Potomac River Bridge at Morgantown.

NEW ROUTE TO THE SOUTH

This \$5,400,000 structure replaced no old bridge, as was the case at Havre de Grace. It was new construction on a new location and gave the public an entirely new route to the South.

Since the Potomac is navigable below Washington, the bridge was built high enough to accommodate the largest ships that might enter the waters of the Capital. There is a vertical clearance of 135 feet.

The traffic engineers estimated the bridge would average 136,000 vehicles per year for the first five years. In 1942 the bridge carried 171,600 motor vehicles, in 1950, 1,008,000 and in 1956, 1,958,000.⁶ The toll was set at 75 cents per passenger car at first, but has since been raised to \$1.00.

THE CHESAPEAKE CROSSING

In the Greiner Company's 1938 report on the primary bridge program, it was estimated that a bridge from Sandy Point near Annapolis to Kent Island could be constructed for \$14,110,000 including approaches.⁷ When the structure was finally finished in 1952 it had cost some \$45,000,000.

After the War Department's deferment of approval in 1938 and 1939, and following failure to get PWA funds, the project was temporarily abandoned. The State instead purchased and improved the ferry system across the Bay.

⁶ SRC 1941-42, page 326; SRC 1949-50, page 360; SRC 1955-56, page 472.

⁷ Greiner Report, *supra*, page 154.

THE OLD FERRY SYSTEM

Ferries had shuttled back and forth between Maryland's two shores since the Seventeenth Century. One of George Washington's favorite routes to the north was from Annapolis by sail to Chestertown.

By 1938, however, there were only three ferries left, the Love Point and Tolchester ferries operating out of Baltimore and the service from Annapolis to Matapeake.⁸

This ferry system had been operated for some years by a private company headed by former Governor Harrington. Its steamboats, all named for Maryland's public officials, were land-marks on the local scene. They first ran from Annapolis to Claiborne, taking about two hours. In the Twenties, the State built an Eastern Shore Boulevard to meet these boats.

In later years the eastern terminal had been shifted to Matapeake on Kent Island, speeding the crossing to about forty minutes.

In 1941 the Roads Commission bought the ferry system from the Harrington interests, moved the western terminal to Sandy Point, purchased a new boat and improved the service to a 25-minute trip. Governor Herbert R. O'Connor engineered the purchase which was financed by revenue bonds and cost the State \$1,020,810, including vessels, terminals, real property and other items.⁹

In 1953, after the Bay Bridge was in use, the State sold its ferry boats to the State of Washington.¹⁰ The "Harry W. Nice" has been renamed the Olympic. The "Herbert R. O'Connor" is now called the Rhododendron. Both have runs on Puget Sound, out of Seattle.

LANE TAKES THE LEAD FOR A BAY BRIDGE

When Governor Lane assumed office in 1947 he made the Bay Bridge his first priority construction project.

A legislative act prepared by him provided for the pooling of revenues from the Susquehanna and Potomac bridges, both of which had been uniformly successful since their openings seven years earlier. This paved the way for the financing of the bridge as a toll revenue facility and for the beginning of work early in 1949.

LONGEST IN THE WORLD

The bridge was built by the Roads Commission between Kent Island on the Shore and Sandy Point in Anne Arundel County, some two miles

⁸ *Ibid.*, page 127.

⁹ SRC 1941-42, page 331.

¹⁰ SRC 1953-54, pp. 293, 466.

north of Annapolis. It is 4.03 miles long, the largest continuous entirely over-water steel structure in the world.

To safeguard shipping in the Baltimore Harbor, the vertical clearance under the suspension bridge is 186½ feet and the horizontal clearance is 1,500 feet.

BRIDGE CROSSES BAY IN GENTLE ARC

The bridge has been widely acclaimed as one of the great engineering feats of the Century and one of the most beautiful structures in the country.

It crosses the Bay in a long gentle arc, the curve being necessary to comply with federal regulations that a bridge must cross at right angles to the main ship channel.

It rests on reinforced concrete piers supported on steel piles driven into the Bay bottom. The deepest piles penetrate 203 feet below the surface.

Underwater work was started and the first permanent piles were driven in 1950. By the end of that year, the bridge was more than one-third complete. The underwater work had been finished, including the massive concrete piers to support the main towers and the anchor piers to hold the suspension-span cables.

WORK FINISHED UNDER MCKELDIN

The change in state administration that occurred in 1951 brought renewed directives, now from Governor Theodore R. McKeldin, to exert every effort toward completion of the bridge. Three years and seven months after the start of construction, the hope of many years for a fixed Bay crossing became a reality.

Elaborate ceremonies dedicated the structure in midsummer 1952.

BRIDGE IS BYPASS OF CITY TRAFFIC

The bridge has furnished a short-cut for north-south traffic, an effective bypass of Baltimore and Washington traffic. With a traffic capacity of 8,500,000 motor vehicles a year, it carried 1,919,000 in 1953 and 2,836,000 in 1957.

Toll rates were set at \$1.40 for passenger car and driver, but these were reduced in 1957 to \$1.25.

Maryland's primary bridge program now was three up and one to go.

The greatest of them all, the Patapsco crossing at Baltimore, will be discussed in Chapter XXI.

Chapter XVII

WORLD WAR II AND THE ACCESS ROADS

Governor Herbert R. O'Connor came into office in 1939 full of hope and promise for the State Roads picture.

Federal funds tied up in Washington had been partially shaken loose. Preliminary findings of the planning surveys had shown what was wrong with the roads, and where. And Governor O'Connor's campaign utterances had assured the people a top-flight, non-political appointment as Roads Commission Chairman.



Mr. Whitman

The Governor found his man in Ezra B. Whitman of Baltimore. A Cornell engineering graduate, Whitman had practiced his profession in the City with only one prior interlude in public office, a term as Chairman of the Public Service Commission. The Governor was instrumental in having the Chairman's salary raised from \$6,000 a year to \$10,000.

The associate members were P. Watson Webb, a Cambridge banker and newspaper publisher, and W. Frank Thomas, the minority member, who was a retired highway contractor and lived in Westminster.

The new Chief Engineer, succeeding Nathan L. Smith who resigned, was Wilson T. Ballard who, like Whitman, was a practicing Baltimore engineer and a Cornell graduate. He had served briefly as a regional chief engineer for the Public Works Administration.



Mr. Ballard

Governor O'Connor was instrumental in solving a prime problem, the diversion of gasoline tax revenue to the general budget. He also helped release some three million dollars in federal funds tied up in Washington which the government had held because rights-of-way on certain projects had not been cleared.



Access roads to near plants constituted the main road-building of the years of World War II. This is a view of dualized North Point Boulevard, the principal road to the Sparrows Point steel mills and shipyard.

NEW RIGHT OF WAY LAW

Before the O'Connor Administration, property needed for the new roads could not be taken by the State, unless the owner agreed, until the last court appeals had been tried in condemnation suits. This sometimes held up the building of a road for years.

In 1942 a constitutional amendment was adopted changing this situation. After that the State could enter property and commence construction at once upon paying into court what the Roads Commission believed was a fair value for the land. The legal disputes might continue indefinitely but, in the meantime, the highway construction went forward.

This new legislation helped speed up right-of-way acquisition.

Later legislation limited the right of the Commission to enter property occupied by certain types of buildings, such as dwelling houses or commercial establishments.¹

FOUR YEAR PLAN

The new Commission announced its own program of arterial highway construction, a four-year plan to cost forty million dollars and to be financed partly by bond issue.

The dualization of U. S. 40 west of Baltimore would be continued; and another dual highway to be known as the Eastern Shore Boulevard would bisect the Shore from Elkton to Ocean City. There were plans for an Annapolis Bypass, a new Back River bridge and many other projects.

PREVIOUSLY AUTHORIZED CONSTRUCTION PUSHED

While this Four Year Plan was being discussed and compared with previous programs, the Commission went ahead with the construction work already committed.

A six-mile section of U. S. 213 (now U. S. 50) from Peach Blossom Creek to Trappe was completed on a new location as one lane of an ultimate dual, to be a part of the Shore Boulevard. Work on the Frederick-Hagerstown relocation continued and a relocation of U. S. 40 in the Hancock area was started with a new bridge over Tonoloway Creek.

The Potomac bridge was built, together with a 1.6 mile connection to it from Newburg as the first lane of a projected dual. The road through Southern Maryland leading to the bridge, built as the Crain Highway

¹ State Constitutional Amendment. Proposed by Acts of 1941, Chapter 606—ratified by the People, November 1942; Acts of 1956, Chapter 59, Sec. 9E.

and also known as State Route 3, now became U. S. 301 in deference to its interstate status.

The Susquehanna Bridge was also constructed and the dualization of U. S. 40 northward to Delaware was finished.

Connecticut Avenue and Old Georgetown Road were widened to accommodate the increased traffic in the Washington area. The dualization of North Point Boulevard was commenced and a brand new northern entrance to Ocean City was constructed of a new type of road material, a sand-bituminous roadway built along the ocean to Fenwick at the Delaware line.

In the first two years of the O'Connor administration P.W.A. construction of more or less minor projects in all sections of the State ran to \$1,843,583, of which the Federal Government contributed about 60 percent.

A traffic division was organized in the Commission in 1940 to carry on the traffic and other studies made by the Highway Planning Survey, which completed its work that year.

WAR CLOSES IN

During 1940 and 1941 the dark clouds of impending war were encompassing the country. There was a certain electrifying current in the air. The great depression, which had been felt throughout all the Thirties, not only lowered spirits but also the personal income of almost all Americans. State employees, for example, had been required to take an across-the-board cut in pay.

Then suddenly the tempo changed. With the outbreak of war in Europe, America became the arsenal of democracy.

Factories such as the Glenn L. Martin Company at Middle River received huge contracts for bombers and other war planes. The steel mills and shipyard at Sparrows Point buzzed with an activity not experienced since World War I. The military installations at Meade, Edgewood, Aberdeen and many other places in the State hummed with huge expansion programs.

And so it went, all through Maryland and all through the nation. The sluggish economy of the Thirties was giving way to a wartime boom of the Forties.

With Pearl Harbor in 1941 we were no longer merely the arsenal of the Allies; we were in it ourselves with material and manpower and every reserve of our resourceful country.

WAR SHELVES INTEGRATED ROAD PROGRAMS

The made-work programs of the Federal Government to cope with unemployment ground to an abrupt halt. There soon developed an acute shortage of manpower as more and more of highway contractors' and Roads Commission personnel went into the armed services or into war plants.

The several fine programs for scientific development of arterial networks were put into pigeonholes. In their place came urgent demands for "defense highways" and "military access roads" in various sections of the State.

ACCESS ROADS ARE ORDER OF THE DAY

Federal aid of all types was immediately cut off as of December 7, 1941, the day war was declared, and all previously approved programs were cancelled. From that time on federal funds were distributed under the Defense Highway Act of 1941, which provided for construction of roads leading to war plants and military installations.

Under this authorization the Commission built Martin Boulevard and extended Eastern Avenue to the Martin Plant. It completed the dualization of North Point Boulevard to the Sparrows Point area, built the cloverleaf connecting this Boulevard with Erdman Avenue and overpassing U. S. 40, constructed a new approach to Edgewood Arsenal and a U. S. 40 grade separation at the access road to Aberdeen Proving Grounds.

It constructed an access road (State Route 235) to the Patuxent Naval Air Test Center in St. Mary's County.

It built a Waterview Avenue approach and overpass at Hanover Street and a new approach to the Fairfield Shipyard area from Hanover Street.

It rebuilt the road in Calvert County between Prince Frederick and the military bases near Solomons Island and constructed the Camp Ritchie-Pen Mar Road in Washington County. The cost of this work and other similar projects was some \$28,000,000 of which \$13,000,000 was federal aid.

Although built solely as wartime measures, the Commission was able to say after the War: "Without exception those projects now continue to serve as highly valuable parts of the peace-time highway system."

PERSONNEL BECOMES BIG PROBLEM

The years of the War were trying ones for the Roads Commission, and for business generally.

It was next to impossible to hold together a staff to turn out the work. Some of the best men were in the armed services; others were in war plants where engineering services were at a premium.

Of these years Chief Engineer Ballard reported: "They will be remembered as part of the most difficult period in the history of the Commission in its efforts to retain an adequate organization, and to carry on effectively its work of designing and planning, maintenance of highways and new construction of State and county roads, including those of military necessity."

RIFT APPEARS IN THE WAR CLOUDS

However, the picture brightened somewhat in 1944 after the Normandy landings. There seemed to be a general feeling throughout the country that "it's just a question of time, now."

This cautious optimism resulted in a noticeable loosening of federal restraints on both material and manpower.

In the summer of 1944 the Roads Commission submitted to the War Production Board a list of twelve "urgent and immediate" projects not directly connected with the war effort.

Eight of these were approved involving expenditures of some \$4,600,000.

One not approved was the completion of the Frederick-Hagerstown relocation. This ambitious and scenic mountain route had been half-built when war broke out and remained so into the post-war years.

Bridge Engineer Hopkins presented what he called a "pre-postwar" program for the construction of nine bridges, and several of these were approved.

NEW FEDERAL POLICY

Later in the year, in preparation for the postwar period, Congress passed the Federal Aid Highway Act of 1944, which represented a new approach to federal highway financing.

It recognized three principal categories of highways: rural primary, secondary or farm-to-market roads, and urban streets and roads. Maryland's share of the federal allotment for the first year beginning in 1945 was about \$4,790,000, which was to be matched by the State or cities on a fifty-fifty basis.

In the meantime the Commission went ahead with its planning, its road designs on important postwar contracts and the programming of huge interconnecting projects, such as a new Baltimore-Washington Parkway.

WAR'S END—STRIKES AND HIGH PRICES

The surrender of Germany and the fall of Japan in 1945 thus found the Roads Commission prepared for the postwar construction period—on paper, at least.

But the country was still economically dislocated. Relations between management and labor, which had been kept static during the tremendous effort of wartime, suddenly broke asunder. Prices which had been kept within bounds by wartime controls shot sky-high as fast as controls were lifted. Projects which had been estimated on prewar prices had to be re-examined, re-considered and in some cases deferred.

As the Chief Engineer pointed out at the close of 1946: "Nationwide labor problems and strikes in basic industries soon after the war's end have brought about and are continuing to cause increasing shortages and mounting costs of all materials and labor—and budgeted amounts have been rather completely upset."

HARBOR PLANNING CONTINUES

The eight-year administration of Governor Herbert R. O'Connor was one of frustration and delay, so far as road-building was concerned. Yet much construction work was done which fitted into the pattern of the following years. And the delay gave time for a re-evaluation of plans.

For instance, the Baltimore harbor crossing at the beginning of the O'Connor term was planned merely as a bridge between Canton and Fairfield, using city streets for access. By the end of the period, however, the plans had blossomed out on both sides into a great municipal expressway, connected on the south with a new Washington freeway.

Delay is not always time lost.

REINDOLLAR BECOMES CHAIRMAN

Two changes in Commission membership occurred in 1945. W. Frank Thomas died in office and was succeeded as minority member by Russell H. McCain, an engineer from Frederick. Ezra B. Whitman resigned as Chairman and was succeeded by Robert M. Reindollar, who at the time was Assistant Chief Engineer.

Bob Reindollar was the second chairman to have risen from the ranks; Mackall was the first.

Reindollar started with the Commission in 1910, having been transferred from the old Maryland Geological Survey when the two units merged. From office boy and then rodman on a survey party he worked



Mr. Reindollar

his way up through various departments until in 1929 he was made assistant chief engineer in charge of both construction and maintenance activities.

His reputation was more than merely local. He was author of the "Reindollar plan" to link Boston with Washington by a system of superhighways. He was active in many national associations in the highway field.

Reindollar was one of that hard core of Roads Commission men whose lives almost paralleled the period of this history, the first fifty years. As such, he played a vital part in the transformation of the Maryland highway scene from oyster shell roads to expressways of concrete and blacktop.

Part IV

THE LAST DECADE

(1948 — 1958)

Chapter XVIII

THE POSTWAR BOOM

In 1948 Maryland launched its greatest road building program up to that time—one which laid the groundwork for the major construction of the Fifties.

The plan had been unveiled before the 1947 Legislature which had given it enthusiastic approval. It was designed to give Maryland “a system of highways second to none in the nation,” in the words of its author, Governor William Preston Lane.¹

In the four fiscal years of the Lane Administration the Roads Commission built or rebuilt 757 miles of roads at a cost of \$106,300,000,² planned and commenced construction of Maryland’s expressway system of today, and started work on the Chesapeake Bay Bridge which united the State and was Governor Lane’s pet personal project.

During the quadrennium the Commission’s road-building spending increased from an average of \$7,000,000 a year to \$33,300,000.

THE FIRST ADVISORY COUNCIL

Such an expanded program threw a heavy burden on the Commission which was just recovering from wartime labor shortages.

¹ Lane Inaugural Address, January 1947.

² SRC 1947-48, page 2; SRC 1949-50, pp. 1, 3.



Governor Lane operates earth moving equipment to start one of the new projects.



Some highways were built with partial control of access, as this section of U. S. 40 near Pine Orchard in Howard County.

To help the Engineering Department reorganize and to counsel the Commission on its fiscal policies, the Governor appointed a committee which became the Commission's first "advisory council," a policy of outside assistance which has been continued through the past decade.

The first chairman of this body was Howard Bruce, who had been a Commission member during the Ritchie administration.

The Council calculated that the seven-million annual expenditure of the past should be adjusted to a figure of ten million due to the still rising prices of the post-war period. It further estimated that from the Lane road program of 1947 the Commission would have available between 35 and 40 million dollars a year for the next five years.

Only one change was made in Roads Commission membership. Robert M. Reindollar was retained as chairman and Russell H. McCain as minority member. The Eastern Shore membership was transferred from P. Watson Webb, who resigned, to Joseph M. George, a prominent grain and feed merchant in Queen Anne's County.

George was his county's State Senator. His father, John E. George, had served on the Roads Commission in the Harrington administration.

CHILDS NEW CHIEF ENGINEER

For its new chief engineer, the Lane Commission selected William F. Childs, Jr., who had a background of thirty years Commission experience. A native of Anne Arundel County and a Cornell engineering graduate, he had been district engineer at both Frederick and Salisbury, consultant on several location studies of Potomac structures, manager of the state-wide highway planning survey, director of the transportation study of the Baltimore metropolitan area and first head of the Commission's traffic division.



Mr. Childs

Under his guidance, a number of changes were made in an effort to streamline the Engineering Department.

THE ENGINEERING REORGANIZATION

The Commission created the position of deputy chief engineer (Walter C. Hopkins from the Bridge Division); assistant chief engineer for maintenance (P. A. Morison); and assistant chief engineer for construction (Gerald S. Rinehart who shortly thereafter left the Commission service and was replaced by Cordt A. Goldeisen).

The Plans and Surveys Division, which was one of the Commission's oldest agencies and had been inherited from the old Geological Survey in

1908, was abolished to make way for a new unit entitled Division of Road Design. Allan Lee, a Johns Hopkins engineering graduate who had been in the Bridge Division, headed this section which had two principal divisions, both greatly expanded to handle the new workload: designs and plans (Walter A. Friend) and surveys and locations (Norman M. Pritchett).

To handle the increased amount of contract cost estimating and other statistical work, the new position of Office Engineer was created and filled by A. F. DiDomenico, who had come from Baltimore City's Engineering Department and had been Childs' assistant in the metropolitan transportation study.

George N. Lewis, Jr. succeeded Childs as Director of the Traffic Division and Albert L. Grubb succeeded Hopkins as Engineer of Bridge Design.

The Accounting Department was reorganized to cope with the expanded program. Carl L. Wannan, a certified public accountant, who had been a deputy state auditor and was familiar with the financial set-up of the Roads Commission, became the first Comptroller. William A. Codd remained as chief auditor and handled the growing problems of toll facilities.

The office staff of the Commission itself was expanded and Albert S. Gordon was selected as Executive Assistant to the Chairman. Lamar H. Steuart resigned after 29 years as Secretary of the Commission and was replaced by Charles R. Pease, a businessman brought in from outside the organization.³

All in all, the number of employees on the Roads Commission payroll increased in the Lane administration from 1,970 to 3,005, a 52 percent jump.

FINANCING THE PROGRAM

Governor Lane's five-year highway program was presented to the Legislature in a special message delivered at the regular session of 1947.

To finance it he asked for a 100-million-dollar bond issue, an increase in the gasoline tax from four to five cents, an increase in motor vehicle license fees with emphasis on the heavy trucks, allocation of the titling tax fees to the Roads Commission instead of to the general funds of the State, support of the State Police out of general revenues instead of motor vehicle receipts and a re-distribution of such funds on a 50-30-20 basis to the Roads Commission, Baltimore City and the counties which thereafter were to finance their own road construction and maintenance.

³ SRC 1947-48, page 1; SRC 1949-50, pp. 1, 2.

In all, his plan would cost \$200 million.

Referring to the urgent need of road rehabilitation he said: "It has not been possible, because of lack of materials, scarcity of labor and other handicaps, to do much with the highway system during the war."⁴

The Governor got most of the legislation he asked for and the new roads program was ready to roll in the construction season of 1948.

ADOPTION OF CONTROLLED ACCESS

One of the great contributions of the Lane administration to the highway system was the planning and partial construction of some expressways designed on the controlled-access principle.

The Baltimore-Washington Expressway, the Baltimore-Harrisburg Expressway, and the Washington National Pike south from Frederick were planned with full control of access except at traffic interchanges.

Some other highways were planned to follow the principle of partial control, such as the section of U. S. 40 from Pine Orchard to West Friendship and the eastern approach (U. S. 50) to the Bay Bridge, then being constructed. On these roads access was denied except at certain selected public road crossings.⁵

Controlled access was slow to catch on in Maryland, as in the other states. From time immemorial people had gained access to their roads wherever they wanted; they did not take kindly to long detours to get on roads in front of their properties.

Yet the arguments in favor of controlled access were incontrovertible from the point of view of both safety and convenience to the highway user.

The Lane administration made the courageous move to begin whole new highways on this principle—a worthy inheritance to future motorists of Maryland and to the next administration. This step was formalized by the Expressway Act of 1947.⁶

Some fine new highways were started which the planners knew could not be finished within the \$200 million program. Chairman Reindollar

⁴ Governor Lane's Special Message to the Legislature, March 6, 1947.

⁵ SRC 1949-50, pp. 110, 126.

⁶ This statute defined an "expressway" as a major thoroughfare containing two or more lanes in each direction with the following characteristics, among others: (1) median divider separating opposing traffic lanes, (2) grade separation structures at all intersections and (3) points of access and egress limited to predetermined locations. Such highways are known as "limited access" roads.

It further defined a "controlled access arterial highway" as one with the same characteristics as an expressway except that the conflict of cross streams of traffic need not be eliminated at every intersection by grade separation structures. These highways are known as "controlled access" roads. Acts of 1947 (special session), Chapter 47; Code, Article 89B, Sec. 18.

frankly stated: "Our policy is to start a number of roads all at once and go as far as the money will permit."

The Lane administration hoped that when the people saw the new construction they would want it completed.

SHARP COST JUMP

One of the alarming aspects of the new program was the rapidly rising cost of construction—increases out of proportion to the rising cost-of-living index.

Since the removal of wartime price controls, an inflationary period had set in and costs of basic items were fifty to a hundred percent higher than before the war. But road costs were even higher.

For one thing, design standards had been changed by the inclusion of built-in safety features. Twenty-foot pre-war pavements were now twenty-four feet wide. Reduction of grades required expensive excavation, pavements were thicker to carry the heavier traffic. Wide shoulders called for much wider rights of way. On controlled-access expressways the grade separations and interchanges ran up the cost.

Chairman Reindollar reported in 1950 that simple widening and resurfacing projects built to the improved designs were costing \$70,000 a mile. New single-lane highways without access control, such as the Wye Mills-Easton road (U. S. 50), ran to \$100,000 a mile including rights of way for an ultimate second lane. The new controlled-access expressways, he said, were averaging \$600,000 a mile while such superhighways as the Baltimore-Washington Expressway had reached the astronomical figure of a million a mile.

Many people wondered whether it would not be better to ditch the expressway program, concentrate on improving the existing roads and wait for more normal times.

KOREA AND INFLATION

But normal times—if there ever have been such—showed no signs of an immediate return.

Instead, the Korean campaign caused a shortage of material, a new inflationary spiral and another personnel problem for the Commission. The Construction Division, for instance, reported that of 345 men on its staff assigned to inspection work, 70 were in some branch of the military service, and 153 others were in the military age bracket between 19 and 26 years old.⁷

⁷ SRC 1949-50, page 91.

SHALL WE FINISH THE JOB?

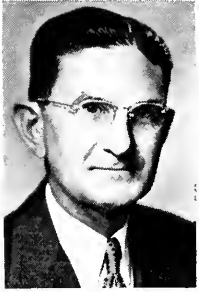
Yet the Lane administration stuck to its guns and built, as far as it was able, the roads it knew were best in the long run for the ever-increasing traffic.

Chairman Reindollar, whose salary of \$10,000 a year had been raised during his term to \$15,000, resigned his office at the end of 1950 to enter private business. He was offered a position as consultant to the Roads Commission but declined.

In a parting statement he said that the Lane highway program was but half-finished and that the \$100 million bond issue would be exhausted by 1952. He added: "The question before the people of Maryland today is whether they want to finish the job."

Reindollar later became president of the American Roadbuilders Association. He died in 1956.

The shadows were lengthening on the administration of Governor Lane. A new governor as well as a new legislature were ready to take over in 1951. As a short-term appointment the Governor made Senator George chairman of the Commission and appointed a new member to succeed Reindollar, Leonard E. Kolmer, Baltimore manager of the Automobile Club of Maryland and a former editor of the *Frederick Post*.



Mr. George

The farsighted activity of the last four years had laid a solid foundation for the future. But it was only a start.

The very factors that had made Maryland the "best-roaded state" in the Twenties had operated against her in the Thirties. States slower to start went ahead with new techniques while Maryland merely added shoulders.

Satisfactory as temporary expedients, concrete shoulders to widen pavements were no answer to the heavy trucks and busses of the Forties. They merely perpetuated the poor grades and alignments of the turn-pike era.

New vision, relocation of roads and a radical change of policy were needed. These Reindollar helped supply.



One of the first major projects completed under the Twelve Year Program was the Eastern Shore Expressway from the Bay Bridge eastward to Delaware. The inset shows the road it supplanted, near Sassafras in Kent County.

Chapter XIX

THE TWELVE-YEAR PROGRAM

Governor Theodore R. McKeldin came into office in 1951 on a platform that called for a careful examination of the previous administration's highway-building and financing policies.

He had a thorough study made of both future road needs and the State's capacity to pay for them. There was time for such a study since the Lane \$100 million bond issue would carry the plans for two to three more years.

Thus when the Governor went before the 1953 Legislature he was able to present a package of road building and financing deemed adequate for the foreseeable future.

This plan came to be known as the Twelve-Year Program and was designed to rebuild Maryland's highway system by 1965.

Its keynote was a scheduled priority system of improvement so that each county would know in advance which roads were to be built or improved, and when.

The package carried an estimated price tag of \$568 million, based on the 1947-52 cost figures.

NEW COMMISSION AND COUNCIL

For his new chairman of the Roads Commission, Governor McKeldin appointed Russell H. McCain, of Frederick, who had been the minority member of the Commission since 1945, serving during both the O'Connor and Lane administrations.

McCain brought to the chairmanship an engineering background and the experience of over five years on the Commission.

The second member of the new team was Avery W. Hall, a Salisbury insurance broker. When he resigned after three years he was succeeded by another Salisbury businessman, Edgar T. Bennett, who had been State Senator from Wicomico County.



Mr. McCain

The minority member appointed in 1951 was David M. Nichols, a Baltimore real estate executive. In 1954 Nichols resigned and his place was taken by another Baltimore realtor, Bramwell Kelly.

The Governor also appointed a highway advisory council to work with the Commission in formulating its program. The Chairman was Dr. Abel Wolman, the Johns Hopkins engineer who had headed a State Planning Commission roads survey in the Thirties. The two other members were Charles S. Garland, senior partner of the investment banking firm of Alexander Brown & Sons, and E. Asbury Davis, chairman of the board of the United States Fidelity and Guaranty Company.

Those unpaid posts were no sinecures and the McKeldin council members proved it by devoting many laborious hours to a survey of the Maryland roads picture.

MILE-BY-MILE INVENTORY

Roads Commission engineers during 1951 and 1952 laid the groundwork for the new program by making a physical inventory of each one of the 4,736 miles in the state roads system, a mileage which had grown year by year since 1908.

This inventory disclosed what was wrong with the present system, how many curves were too sharp for modern speeds and kindred matters.

The next step was to determine what improvements were necessary to bring the system up to "approved standards." These standards had been prepared and adopted by the Commission in 1948.

The mileage built and under construction in the Lane program together with certain other mileage was found generally satisfactory. However, of the 4,736 miles in the system, 3,159 or 67 percent were found to need improvement or reconstruction, together with 291 miles of new roads on new locations.

Among these was an Eastern Shore expressway to connect the new Bay Bridge with the Delaware line, thus giving Atlantic Seaboard traffic a new route through the State. A new U. S. 40 east of Baltimore was also found to be required.

Of this latter route the engineers reported:

"At the time the 1940 program was prepared it was generally believed that the then recently completed U. S. 40—a four-lane divided highway between Baltimore and the Delaware line—would be adequate to serve traffic for many years beyond 1960. Today this road is inadequate to handle safely and expeditiously the traffic using it.

"Poor planning cannot be blamed—rather it is the encroachment on the margin by sundry and assorted commercial enterprises which has made

it necessary to consider an entirely new location rather than purchase additional rights-of-way.

"It is ironical that the highway which brought prosperity and high land values to these roadside businesses has become functionally obsolete because of lack of control of access."

Also recommended were the beltway routes around Washington and Baltimore, a dual highway between Baltimore and Reisterstown (U. S. 140) and others.

CONCERN OVER COSTS

The report on the Twelve-Year Program was made during the inflationary period following the Korean crisis and both the Roads Commission and its Advisory Council were deeply concerned about the costs. "It is most unfortunate," they said, "that the recognition of this problem comes at a time when our national economy is geared to defense production, taxes have reached an all-time high, and labor and material costs have advanced to previously unequalled heights."

They found that the 1951 dollar had a value of 51 cents compared to the 1941 dollar; and further that the increase in the unit cost of highway construction and maintenance "has far exceeded the increase in the cost of living."

In 1952 the Commission and Advisory Council could not foresee whether construction costs would go up or down in the years ahead. It hardly seemed likely they could or would go much higher. In projecting a program for the Legislature, however, they had to estimate costs over its entire 12-year length. So using their composite best judgment they based their cost estimates on "the performance and experience gained during the past five years of higher-cost road construction" (1947-1952).

They added: "Assuming that these costs will remain reasonably stable, the total cost of the program will be as indicated" (\$568 million).

In 1958, as prices have continued to rise, and in future years as they will surely fluctuate, it is important to remember that the Twelve-Year Program was estimated on the cost index for the years 1947-52.

CONTROL OF ACCESS AND TOLL ROADS

The Twelve-Year report recommended control of access on the new roads to prevent them from becoming "typical Washington Boulevards." Control of access on bypasses around towns was also recommended "to prevent encroachments that will eventually necessitate the bypassing of a bypass."

The Commission and Advisory Council also recommended a thorough study of toll roads and partial toll projects. They suggested as toll possibilities the new highway from Annapolis to Washington (U. S. 50), the Washington National Pike (U. S. 240), and the Eastern Shore Expressway from Queenstown to Warwick. They estimated that some \$50 million might be gained in this manner and the money used or released for other highway projects.

They called attention, however, to a 1947-48 survey by traffic experts which indicated there were no roads in Maryland which could be entirely self-liquidating as revenue bond projects.¹

PAYING FOR THE PROGRAM

Ordinary revenue for road purposes under existing laws was calculated to produce over the 12-year period 1954-65 the sum of \$256,340,000. To finance a construction program involving anything like \$568 million, approximately \$311 million more was needed.

The Roads Commission and its advisory council planned to raise this extra money in three ways: a new bond issue, an increase from 5 to 6 cents in the State gasoline tax, and an increase in motor vehicle registration fees.

Because of rising costs of maintenance some \$2 million annually was being diverted from the construction to the maintenance fund. This, over the period of the program, would amount to \$24 million. It was proposed to redeem this sum by the State's share of an increased registration fee. The increase asked was relatively small on passenger cars and proportionately higher on trucks and busses.

Broken down, the financial plan to raise the new money was as follows:

State's fifty percent share of the one-cent gas tax increase -----	\$ 50,512,000
Proceeds from sale of additional bonds -----	330,000,000
Elimination of transfers from construction to maintenance fund, by registration fee increases -----	24,000,000
	<hr/>
Total -----	\$404,512,000
Deduction: Sinking fund requirements -----	92,627,000
	<hr/>
Net additional funds provided -----	\$311,885,000 ²

¹ State Roads Commission Twelve-Year Program (October 27, 1952), pp. 1-13.

² *Ibid*, pp. 29-46.

The Legislature of 1953 passed the entire Twelve-Year Program substantially as proposed except that the increase in the registration fees was postponed to April 1, 1955, instead of 1954 as requested.³

Subsequently, the Legislature postponed it again and finally repealed the increase altogether, thus eliminating one of the important arches of the 3-arch financial structure. The raids on construction funds for maintenance continued.

PREVIOUS PROJECTS GO FORWARD

In the meantime, while the massive new program was formulating and grinding through the legislative mill, progress was being made on other projects previously authorized.

Chief among them was a seven-mile relocation of U. S. 40 over Sideling Hill in Washington County, the first of a continuing program of leveling hazardous mountain tops on Maryland's scenic route to the west.

The Eastern Shore expressway, or Blue Star Memorial Highway as it came to be known, was commenced with construction of a 10-mile controlled-access dual highway from the Bay Bridge east to Queenstown. An interchange was built here, dividing the traffic headed up the Shore from that moving southward to Salisbury and Ocean City. A new dual highway (U. S. 50) was started from Queenstown to a connection near Wye Mills with the Denton road (State Route 404).

U. S. 40 west of Baltimore was dualized for ten more miles, to Ridgeville; U. S. 140 was dualized for seven miles from Finksburg northward; a new Annapolis-Washington expressway was constructed for ten miles as far west as U. S. 301; and work continued on the controlled-access highways begun under the Lane program. And there were many others, as dirt flew on highway projects in every section of the State.⁴

NEW CHIEF ENGINEER

At the end of 1953, with the Twelve-Year Program adopted and scheduled to start the following month, Chief Engineer Childs resigned to make way for a younger man who might be expected to see the project through to completion.

Childs was 68 years old at the time and under State law would retire automatically in two more years. He had been one of the first district engineers in the State and as Chief Engineer had been in charge of both the Lane and the McKeldin programs.

³ Acts of 1953, Chapter 657.

⁴ SRC 1951-52, page 3.



Mr. Pritchett

He remained with the Commission as Advisory Engineer until 1956 when he retired. He is now a consulting engineer.

The man tapped to carry on the new program was Norman M. Pritchett.

He is a career man, having started with the Commission in 1928 as rodman on a survey party. As a result of his highway location work he is completely familiar with the road system in all its ramifications.

Pritchett, a registered professional engineer and land surveyor, was made the Commission's first Location Engineer in 1946 and headed the new Location Division separated from the Road Design Division in 1951.⁵

In addition to a forceful prosecution of the Twelve-Year Program, Pritchett has shown a deep understanding of the long-range problems of the Commission by a continuing interest in highway research.

He sparked the Joint Highway Research Program of the Roads Commission and the University of Maryland in 1956, and served as the first chairman of the administrative board, working with Dean S. S. Steinberg of the University's College of Engineering.

TEN-YEAR COMPARISON

Before 1948 the Commission was handling a construction program that averaged an expenditure of about \$7 million a year. The Lane 5-year plan stepped up road construction to some \$33 millions annually. The engineering staff was reorganized to handle the increased load and, as has been indicated, the personnel of the Commission was increased 52 percent to a total of 3,005 persons.

The Twelve-Year Program has doubled production with only a small expansion of departments and facilities. The engineering and accounting departments today are organized substantially along the lines of the 1948 set-up.

The employed personnel in 1958 stood at 3,204 (an increase of 7%), not including the new employees hired to operate the Harbor Tunnel who are paid from toll receipts.

THE USE OF CONSULTANTS

Aside from a heavy burden of extra work shouldered by many employees, involving extra and largely uncompensated hours, the problem

⁵ SRC 1951-52, page 1.

was partially solved by using outside consulting engineers to design many of the new highways.

This was not new. They had been utilized to advantage as far back as 1915 in the construction of Baltimore's Hanover Street bridge; but their use was increased with the advent of the new program.

The use of outside consulting firms on the large projects, some administrative changes and the employment of new techniques and scientific equipment made possible the handling of an increased work volume.

During the first four years of the program, 1954-57 inclusive, the Commission spent or committed \$276,895,000 on construction, engineering costs and rights of way, or an average of nearly \$70 million a year.

In order to coordinate the work of the consultants with the regular work of the Commission, a liaison department was created in 1956 known as the Office of Special Services. It is headed by Hugh G. Downs.

Other personnel changes made by Chief Engineer Pritchett included the appointment of Warren B. Duckett as Construction Engineer in place of Thomas M. Linthicum, a veteran employee who retired in 1956 at the mandatory age of 70; Clarence W. Clawson as Engineer of Road Design; and Frank V. Dreyer as Location Engineer, the post vacated by Pritchett.

The rapid expansion of all departments of the Roads Commission to carry out the Twelve-Year Program affected the Right-Of-Way Division more than any other—and revealed a weakness in that particular phase of the work.

From an expenditure of \$2,000,000 a year before the Twelve-Year plan was started, right-of-way purchases jumped to \$12,000,000 annually in fiscal 1954 and 1955, an increase of 600 percent.

In the wake of this enormous expansion, with experienced personnel spread thin, came the so-called DuPre case which led to numerous changes in administrative setup and right-of-way acquisition procedures.

Briefly, this episode in State Roads history involved the right-of-way engineer (Ben DuPre) in charge of the area that comprised the Washington National Pike and the Circumferential Highway. In mid-1955 it was charged that DuPre was selling the commission's plans for future highway locations to two Washington real estate operators. This enabled them to buy land at low prices where new rights-of-way were to be purchased, and then sell at a quick profit. Following an exposé, DuPre was discharged from state service and went to Mexico City, his native place. When brought back in 1956 under legal immunity as a state witness, he admitted his part in the transactions and that he was paid \$8,500 for the advance information he supplied. The two real estate men who profited were convicted of conspiracy and fined.

Subsequent investigation revealed that DuPre was the only state employee involved.

The state's ultimate loss, after recoupments of one kind or another, was approximately \$12,000, according to a board of real estate appraisers.

One of several studies precipitated by the DuPre case was made by the Governor's Commission on State Programs, Organization and Finance, headed by Baltimore attorney Harry J. Green and referred to as the Green Commission.

This group made a report late in 1955 regarding the Commission's organization, administrative setup and procedures, its right-of-way acquisitions and other administrative matters. It also recommended that the three-man system be supplanted by a single highway director aided by a three-man advisory board to assist in policy matters.⁶

The Legislature of 1956, at the request of the Commission's Legal Department, moved to plug the loophole revealed by the DuPre case. A statute was passed providing for the preparation of plats or maps showing the location of new highways and the Commission's valuation of each property concerned, such plats to be filed with the Commission "and not to be open to public inspection," with certain exceptions.⁷

It was thought that such procedure would prevent land grabs in the path of future highway construction.

A CHANGE AT THE TOP

By the close of 1955 Governor McKeldin decided to make administrative changes in his Roads Commission. Commenting on the recommendations of the Green Commission, he said: "Even more obvious has been the need for a strong hand of direction and authority in the affairs of the Commission."

The Governor found his "strong hand" in Robert O. Bonnell, a Baltimore banker, whom he appointed chairman in 1956 as successor to Russell McCain, who, after eleven years on the Commission, became an executive assistant to Governor McKeldin.

At the same time the Governor appointed a new minority member, John J. McMullen, president of the Times and Alleganian Company, Cumberland, and publisher of the *Times* and the *News* in that city. Senator Bennett remained as the third member.

⁶ Improving Road Administration in Maryland. A Report to the Governor of Maryland by the Commission on State Programs, Organization and Finance (November 15, 1955), page 4.

⁷ Acts of 1956, Chapter 59.

The new chairman, a native of Indiana, received his college degree in California. He came to Baltimore in 1930 as president of the Morris Plan Bank, later the Public Bank of Maryland. When it merged with the Fidelity Trust Company in 1944 he became a director and a vice-president of that institution and later a vice-president of the Fidelity-Baltimore National Bank.



Mr. Bonnell

He had been president of the Community Chest, the Association of Commerce, the Symphony Orchestra and the Maryland Hospital Service (Blue Cross). He was chairman of the Baltimore Aviation Commission when it built Friendship Airport and co-chairman of the Maryland Joint Port Commission which set up the present Maryland Port Authority.

The salary set for the greatly enlarged duties of Maryland's Road Commission chairman under the reorganization is \$25,000 a year.

MEETINGS IN THE COUNTIES

The new Commission wasted no time in making some administrative changes. Chairman Bonnell became the full-time administrator. To better understand and appreciate the problems and the needs of the various parts of the State, the Commission held meetings in all counties. To these meetings were invited the County Commissioners, the State Senator and the County Delegates to the General Assembly. The relationship thus established proved exceedingly helpful in solving local problems and promoting a better state-wide understanding of the Commission's program for highway development.

The Commission immediately set about to lighten the heavy administrative burden which had been imposed upon the Chief Engineer—in addition to the engineering responsibilities that the twelve-year plan and the federal interstate program entailed.

The Right of Way Department, with LeRoy C. Moser at its head, which had been reporting to the Chief Engineer, was made directly responsible to the Chairman. The Executive Assistant to the Chairman, Albert S. Gordon, was made the Commission's liaison with that department. Henry Kaltenbach, a right of way consultant, was employed on a part-time basis to assist in improving techniques.

The employment of a skilled Personnel Director, reporting to the Chairman, gave the Chief Engineer relief from an endless amount of detail—much of it foreign to his proper function.

TIGHTENING ADMINISTRATIVE PROCEDURES

To assure the Commission that the contractors who bid on highway projects were qualified by experience, know-how, equipment, and finances, and to assure bidders that those competing for State Roads projects were responsible, the prequalification of all contractors was required before their bids would be considered.

A survey of the Commission's equipment, its use and acquisition resulted in the selection of an Equipment Engineer, who improved that operation immeasurably.

The State Roads Commission is installing a two-way radio communication system, the application for which has been approved by the Civilian Defense, which is sharing in the cost. The facility will be installed as soon as approved equipment is made available.

This installation is deemed invaluable in dealing with emergencies—storms, hurricanes, floods, etc. Application has been made for a microwave system.

Another new technique adopted by the Commission in 1958 was the method of xerography for reproducing engineering drawings. It is a direct, positive, dry electrostatic reproduction process that requires no negative. It is clean, economical and more rapid for quality and quantity production, providing greater versatility than the process the Commission previously employed. This process is a great time and expense saver.

The Commission, aided by the garden clubs of Maryland, successfully supported legislation to control outdoor advertising on limited-access highways.

PROGRESS OF THE PROGRAM

The work of the Twelve-Year Program progressed with unabated vigor. During the fiscal years 1955 and 1956 Chief Engineer Pritchett reported completion of 208 improvement projects covering 320 miles of Maryland highways. These included the final leg of the controlled-access dual highway from Ridgeville to Frederick (U. S. 40), a section of the Baltimore Beltway north of Towson and new bridges across the Potomac at Cumberland and Kitzmiller. Dualization of U. S. 301, U. S. 13 and other highways proceeded.⁸

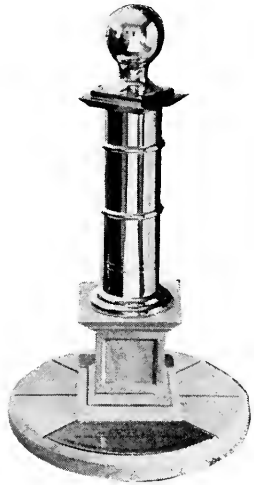


A new section of U. S. 13 south of Salisbury.

⁸ SRC 1955-56, page 3.

GOLDEN MILESTONES

In 1954 the National Highway Users Conference began the practice of singling out certain states for special commendation for present and future highway programming.



The Golden Milestone

Composed of the principal users of the roads such as the auto clubs and the truck and bus companies, this organization wanted to encourage long-range planning and the effective presentation of such programs to the public, in place of the haphazard or year-to-year highway building of the past.

The device selected for the award was a replica of the golden milestone that stood in the Roman Forum, the point of beginning of the road system of the Empire in the days when "all roads led to Rome." The award was made every two years—in 1954, 1956 and 1958.

Maryland won the award in 1954, along with four other states, for the Commission's "scheduling of projects on a priority basis."

It won again in 1956, sharing the honor with but three other states, for a report which "showed the accomplishment of the past two years and related them to the over-all Twelve-Year Program."

Mr. McCain accepted the honors for 1954 and Mr. Bonnell accepted the 1956 award.

The two golden trophies are currently on display in the conference room at Commission headquarters in Baltimore.

GOVERNOR MCKELDIN AND THE ROADS

Throughout the fifty-year period each of the eight governors has taken a personal interest in highways and the problems of the Roads Commission.

None has devoted more personal interest to highway development than Governor McKeldin during his eight years in Annapolis.

He sat in on many sessions of the Advisory Council as the thorny problems of the Twelve-Year Program unfolded.

He took bus tours with the press over new and unfinished roads in every section of the State. He rode jeeps over partially-graded rights-of-way—and at the end of the line he got out and walked. He cut rib-



Gov. McKeldin

bons opening more than 100 stretches of highway and he mounted bulldozers to break ground on many of the new projects.

Labor leaders on one project protested that no non-union man could operate earth-moving equipment, even temporarily. So the Governor joined the union—and went ahead with the ground-breaking.

Governor McKeldin's favorite project was the Baltimore Harbor Tunnel, the largest public enterprise in the State's history. He was present at every important stage of construction, from preliminary sub-surface borings in 1954 to the elaborate ribbon-cutting ceremonies in 1957.

UNCLE SAM AND THE INTERSTATE SYSTEM

Chapter XX

The Federal Government has poured many billions of dollars into the nation's roads systems in the last forty years, almost all of which up to 1956 came from general funds in the United States Treasury.

A small but comparatively prosperous state such as Maryland contributes relatively more highway user revenues at the national level than it gets back in the form of federal-aid funds.

Financial aspects aside, however, federal assistance has been of incalculable benefit to the development of an orderly and intelligent roads program in Maryland and in the other states. The influence has been felt in the field of research, in the adoption of standards, in the selection of routes to form an integrated national system of highways, and in many other fields.

For instance, when the Maryland Roads Commission of the early Thirties planned to widen old Philadelphia Road rather than build a new highway on new location, the federal Bureau of Public Roads felt it should not allocate money for the project. It insisted on the new road which became Pulaski Highway (part of U. S. 40). Viewed in retrospect, improvement of the old road would have been an almost complete waste of money.

OBJECT-LESSON ROADS

The Bureau of Public Roads had its beginning in 1893 as the office of Road Inquiry, then a division of the Department of Agriculture. Its early functions were largely educational. One of its methods was the building of short "object-lesson" roads in various sections of the country so the people could see what good roads actually looked like.

Among the first of these were the two samples built in Maryland in 1898 and 1899, the latter being at Timonium Fair.

Another object-lesson road in Maryland was the paving of Westminster's Main Street in 1910. The federal report on the project described it as giving "practical instruction to local road builders on standard



Hagerstown Bypass—First section started and completed in Maryland under the Federal Interstate Highway Act of 1956. This stretch runs five miles from U. S. 40 to the Pennsylvania line.

methods of construction and demonstration of new materials and new methods.”¹

The street was paved with bituminous macadam, a new road material in 1910, and the cost of the project was at the rate of \$10,588 a mile. This was high-priced roadbuilding in those days, especially in view of the labor costs listed for the project: \$1.50 per day for a ten-hour day.

In 1911 the federal agency built a stretch in Maryland called the “Connecticut Avenue Experimental Road” which it described as the “beginning of a series of thoroughly organized experiments in road construction.”

The section selected, a 3,300-foot strip between Bradley Lane and the District of Columbia line, was paved with eight different kinds of road metal, from water-bound macadam to asphaltic concrete. Careful cost records were kept of both construction and maintenance, traffic counts were taken and the condition of the paving noted regularly over a period of 16 years.

The results of these experiments were published and furnished valuable information to highway builders throughout the country.²

FIRST FEDERAL AID WAS IN MARYLAND

In 1916 Congress passed and President Wilson signed the first Federal-Aid Road Act, which set up a continuing program of federal assistance to the states on a matching basis. The present Bureau of Public Roads was also established by Congress at the same time.

Federal aid for road building had been tried once before—and in Maryland. Construction of the National Road west from Cumberland by the United States a hundred years earlier has already been described. But in 1822 President Monroe vetoed a bill providing for the collection of tolls to repair it, on the theory that repair work asserted federal jurisdiction over the roadways and therefore was an invasion of states' rights.

The 1916 Act sidestepped this constitutional question by providing that the states should build and maintain the roads. Federal aid was limited to money grants and approval of plans and other details. The law was patterned after the several “state-aid” statutes then in effect which furnished state assistance to county roadbuilders, of which Maryland's 1904 Shoemaker Act was one of the first (*ante*, page 60).

The Federal Highway Act of 1921 required the states to designate a system of principal interstate and inter-county roads, limited to seven

¹ Annual Reports of the Office of Public Roads, Washington, D. C., (1893-1911), page 8.

² Public Roads Magazine, Washington, D. C., Vol. IX, No. 3 (May 1928), pps. 49-59.

percent of the total mileage of rural roads then existing. Use of federal funds was restricted to this system.

This congressional act is important, because, with a few modifications, it has continued through the years and is still the basis of federal-state roadbuilding relations. It has been called the parent of the present system.

Federal grants under the 1921 Act are apportioned to the states according to formulas in which weight is given to the relative area, population and rural mail-route mileage in each state. These grants are matched on a fifty-fifty basis by the states. The states retain the initiative in proposing roads to be constructed or improved, and the type of improvement. They also are responsible for surveys, plans, specifications, right-of-way acquisition, the letting of contracts and the supervision of construction, all subject to the approval of the federal Bureau of Public Roads.

STUB-END ROADS

One of the first visible benefits from the new statute was the selection of a system of continuous interstate highways, so that a motorist could drive from one state into another without encountering a muddy, potholed dirt road beyond the state line.

The Maryland roads system, when completed in 1915, did not even extend to state lines in most cases. Built to connect county seats, it had no particular concern for interstate travel, which was almost entirely by railroad anyway.

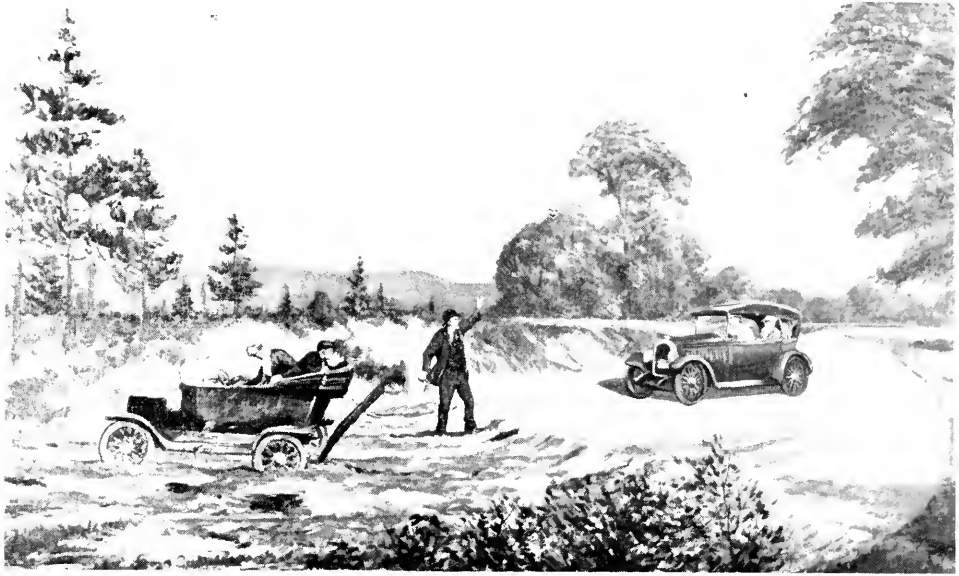
Other states had similar stub-end roads, described by one writer as follows: "State boundaries in 1916 often seemed like canal locks separating a high level of highway improvement on one side from a lower rate of progress upon the other."³

The new federal bureau set out at once to coordinate the main interstate roads in the same manner that the previous state-aid road laws had integrated the county road systems.

SRC READY WITH PLANS

Because it was organized, and Chief Engineer Shirley was ready with his plans, the Maryland Roads Commission was one of the first in the country to match federal money under the new law. It extended most of its roads to connections at state lines and built other projects to take full advantage of the federal allocations.

³ Public Roads of the Past (Historic American Highways), a publication of the American Association of State Highway Officials, Washington, D. C. (1953), page 111.



1916—Mud at the State line

In the first five years of the program, from 1917 to 1922, it constructed 167 miles of federal-aid roads, at a cost of \$4,805,000, or about \$28,000 a mile.⁴

SETTING UP THE SURVEYS

In 1934 Congress passed the Hayden-Cartwright Act fathered by Arizona's "silent senator," Carl Hayden. The act was designed to help the states plan orderly road systems rather than merely surface the trails of the past.

Federal aid by this time was running in excess of one hundred million dollars a year in a frantic and often futile effort to keep the nation's roads abreast of growing traffic. The act set aside up to one and a half percent of federal funds for planning purposes, to be matched by the states.

Under this authorization, 46 states, including Maryland, set up planning surveys to blueprint the roads of the future on a scientific basis.

This statute is still in force and has resulted in continuous study and a storehouse of information on which to plan new construction and improve old, on the theory of "look before you leap."

⁴ SRC 1916-19, page 8; SRC 1927-30, page 46.

CITY STREETS ARE ADDED

The first quarter-century of federal aid was confined to the surfacing of rural roads and their development into an integrated national system. But by the time of World War II it was apparent that many major cities such as Baltimore were in even greater need of assistance because of narrow streets and paralyzing traffic congestion.

In 1941 Congress extended the planning system to include urban highway development, and in 1944 initiated a large-scale program of joint action by federal, state and local governments to solve the city traffic problems, with specific federal-aid money earmarked for the purpose.

THE A B C PROGRAM

The 1944 Act also provided for use of federal funds for purchase of rights of way, and set up a new division of highway allocation known as the federal-aid secondary system, the first organized effort by Congress to build up the farm-to-market roads.⁵

Thus by the end of World War II there was developed the system of federal aid which is in effect today, containing specific allocations for primary, secondary and urban projects, and which came to be known as ABC funds.

Since these allotments are made up to two years in advance to enable the states to raise the matching money and otherwise make their plans, the 1960 apportionment was announced in 1958. Of the nine hundred millions appropriated by Congress, Maryland's share will be \$9,846,985, of which \$3,735,897 is for the State's primary highway system, \$2,289,320 is for secondary or feeder roads, and \$3,821,768 is for urban highways.⁶

THE INTERSTATE HIGHWAY SYSTEM

The most comprehensive and expensive public works program in the country's history was launched by the Federal-aid Highway Act of 1956. It authorized funds for an integrated national system of 41,000 miles and provided for its improvement to high standards.

The groundwork for the interstate system was laid by the above mentioned congressional statute of 1944, a section of which directed the selection of the roads to comprise it.

By 1947 the principal network of the system had been adopted, consisting of 37,700 miles of the most heavily-traveled roads of the federal-

⁵ The Administration of Federal Aid for Highways, a pamphlet of the Bureau of Public Roads, Washington, D. C. (January 1957), pages 2, 3.

⁶ National Highway Users Conference Information Service Bulletin, Washington, D. C. (July 29, 1958).

aid primary system. An additional 2,300 miles of urban connections and beltways were chosen in 1955.

Under appointment by President Eisenhower in 1955, General Lucius Clay headed a committee which made a series of recommendations predicated on the expenditure during the 1955-65 decade of \$101 billion, an over-all figure including ABC and all other funds supplied by federal, state and local governments.

This amount was \$54 billion more than would have been spent in the period by normal revenues, and the Clay Committee recommended that the difference be financed on a pay-as-you-go basis by increasing highway-user taxes. It also firmly endorsed limited- or controlled-access on the entire network of interstate highways, either through relocation, land acquisition or otherwise.

The Bureau reported in the two-year period the completed construction of 1,952 miles, with another 3,159 miles under way. The program is headed by Federal Highway Administrator Bertram D. Tallamy, who was formerly chairman of the New York State Thruway Authority. His first assistant is Ellis L. Armstrong, Commissioner of Public Roads. The Bureau of Public Roads is now a part of the Department of Commerce.

MARYLAND'S INTERSTATE ROADS

Maryland's share of the 41,000 mile interstate system is 350 miles, including the belt roads around Washington and Baltimore and the mileage in Baltimore City. Locations of the highways are U. S. 40 from the Delaware line westward to north of Hancock; U. S. 11 through Washington County; U. S. 111, the Baltimore-Harrisburg Expressway; U. S. 240, the Washington National Pike; and a new road of the future between Washington and Baltimore.

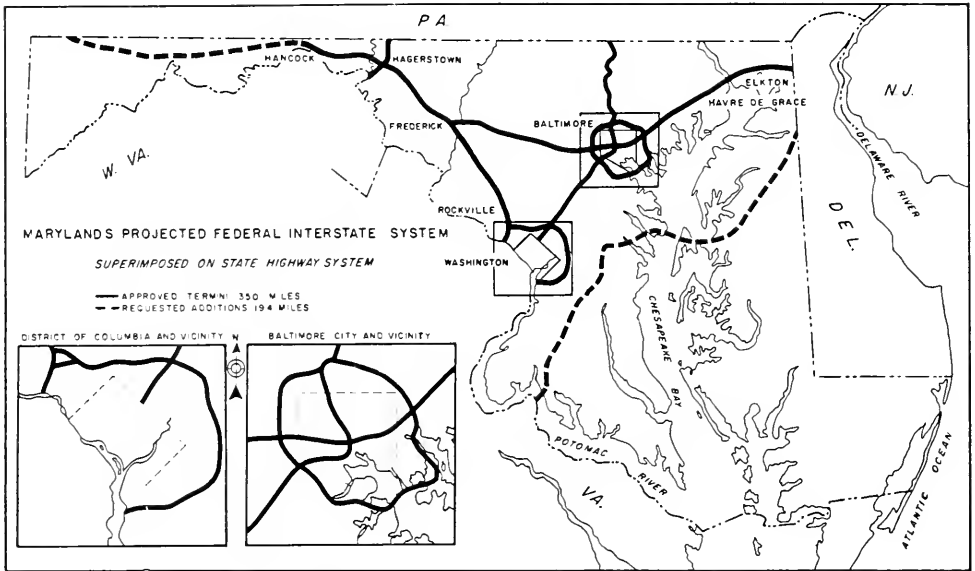
In addition, the Roads Commission has applied for 194 more miles if and when the system is expanded.

Maryland's 1960 apportionment of federal funds for the interstate system was \$56,043,375, about six times greater than the combined allotment of all ABC funds for that year. The 1960 allocation was the first made on the basis of the actual needs of the state.

MONEY BACK ?

Maryland had not waited for the 1956 interstate statute to start building its interstate system.

Shortly after the routes were selected in 1947, the Roads Commission began building the Baltimore-Harrisburg Expressway and the Washing-



Maryland's Interstate System

ton National Pike. Later, work started on the Baltimore Beltway, the Washington Circumferential Highway and the Frederick Bypass, which became a section of U. S. 40 this year.

All five of these projects were limited-access, in the sense that there are no grade crossings or other entrances except at interchanges. Thus they complied with the high federal standards set by the Interstate Act and qualified as part of the system.

The Baltimore-Harrisburg Expressway and the Washington National Pike were more than half completed when the 1956 Act became effective and noticeable progress, involving many millions of dollars, had been made on the other three projects.

States that had made no start whatever on an interstate program until 1956 will have their entire system financed under 90-10 money from Washington. Unless some method of reimbursing the progressive road states is adopted, the states that held back will gain and such states as Maryland will be penalized for their initiative and enterprise.

As of 1958 the question of ultimate reimbursement had not been resolved.

Chapter XXI

THE BALTIMORE TUNNEL THRUWAY

The 16-mile Baltimore tunnel system is a financial and engineering feat of many distinctions. Among these may be counted the fact that it was built within the original cost estimates and that it was opened ahead of schedule—by two days.

Planned to start service on December 1, 1957, the first toll was collected at midnight November 29. Among its first customers were football fans attending the Army-Navy game in Philadelphia on November 30.

The opening was the signal for celebration on a scale befitting the occasion. The huge toll plaza adjacent to the administration building in Fairfield was crowded with thousands of well-wishers, among whom were City and State leaders and numerous representatives of other states.



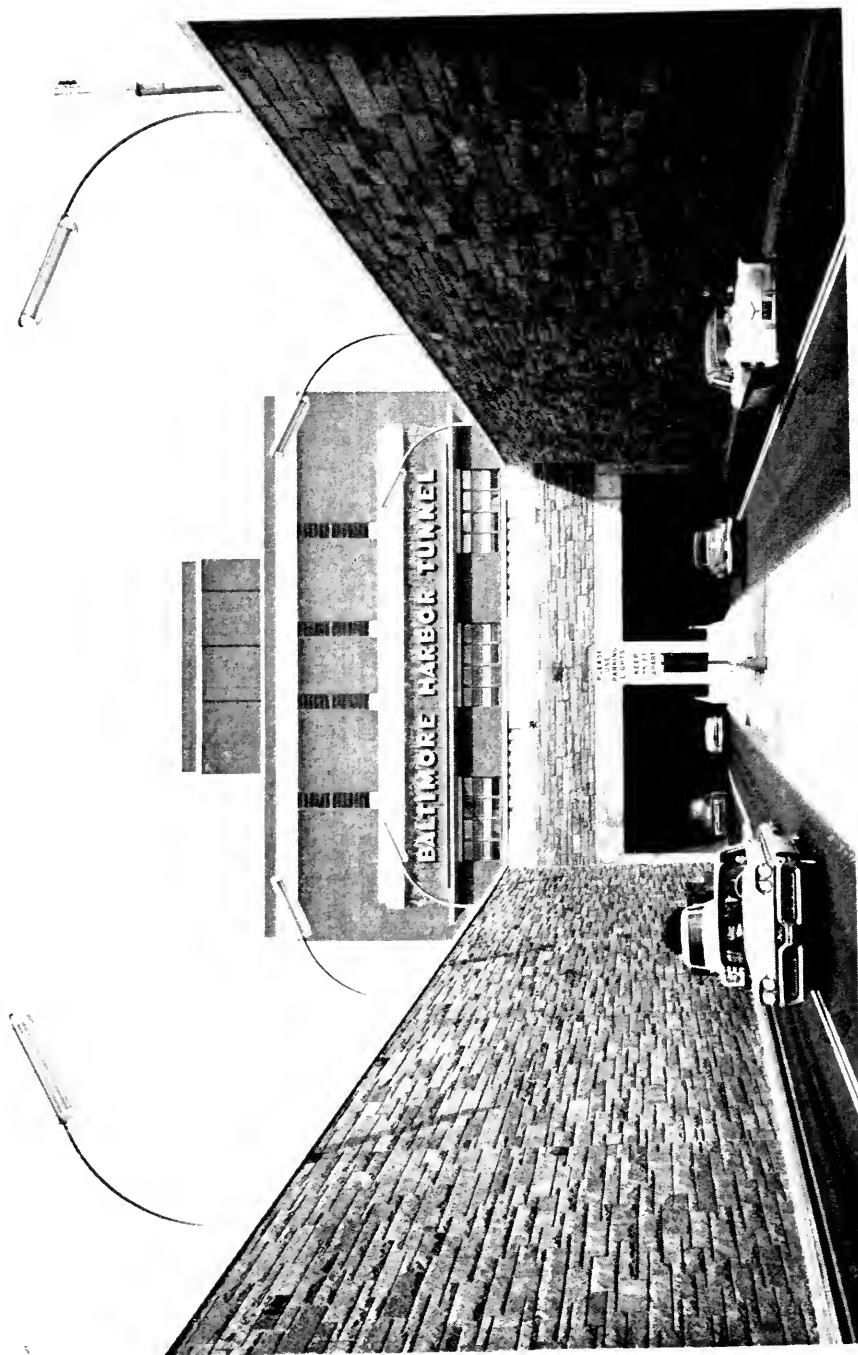
Governor McKeldin cuts yellow and black ribbons at the opening ceremonies. With him are Mrs. McKeldin and Chairman Bonnell.

Chairman Bonnell presided and Governor McKeldin made the principal address.

The Tunnel is a traffic improvement of major national importance. It was widely heralded as breaking the Baltimore bottleneck. It was long overdue.

For more than two hundred years horse-drawn and motor traffic had crawled through the narrow streets of the city on the only direct route between Philadelphia and the south.

In the Thirties, travel bureaus were reportedly routing clients from Philadelphia through Gettysburg to Washington in order to avoid the bottleneck. By 1944 the Administrator of the U. S. Bureau of Public



The Fairfield entrance of the Harbor Tunnel

Roads was calling Baltimore "the worst city in the United States, as far as I know, on the matter of taking care of its through traffic."¹

This notoriety was immediately wiped out with the building of the tunnel system, ninety percent of which is a metropolitan expressway.

BRIDGE FIRST PROPOSED

Maryland's Primary Bridge Program, adopted by the Legislature in the Nice administration, included a crossing of Baltimore's harbor.

The long delay in beginning that crossing gave time for full consideration of the issues and for many refinements in plans. As originally proposed, a bridge was scheduled to span the Patapsco River, connecting with existing streets on both sides of the harbor. In 1943 the Roads Commission drew up a new plan providing for a combination bridge and highway project starting on the north at U. S. 40 and Erdman Avenue and ending on the south at U. S. 1 on Washington Boulevard.²

FORT MCHENRY CROSSING CONSIDERED

Baltimore City interests wanted a Fort McHenry-Canton crossing, believing this route would better serve local traffic and at the same time speed the interstate traveler through the city. Aviation and shipping interests opposed a bridge as harmful to navigation.

The Roads Commission finally decided upon a Canton-Fairfield crossing as the best solution to the through as well as local traffic problem from the point of view of the rapidly developing state highway system.

A tunnel was selected instead of a bridge when the traffic experts discovered that a twin-tube facility, carrying two lanes in each direction, could be built within the funds reasonably expected from toll revenue over the years.



View of the Tunnel interior.

PRIMARY BRIDGE PROGRAM NOW COMPLETE

The project was financed from a \$180 million bond issue which retired all outstanding bonds on the three toll bridges and left some \$130 million to pay for the double-barreled tube and its approaches.

¹ Baltimore *Sun*, February 23, 1944.

² Roads Commission Report to Governor O'Connor (November 1, 1943).

Thus the revenues from the tunnel and the three other members of the quartet are pledged as security for payment of the bonds. The State's credit is not involved.

The tunnel system is the largest public project ever undertaken by Maryland and it completed the Primary Bridge Program. No other projects in the future can be tied into it without consent of the bondholders.

TUNNEL THRUWAY MAKES MANY CONNECTIONS

The thruway picks up traffic on U. S. 40 at Moravia Avenue, near Erdman Avenue, and whisks it through the city at open-country speed. The southern end has two prongs, one hooking into Ritchie Highway (State Route 2) and U. S. 301 South, while the other proceeds westerly to the Baltimore-Washington Expressway and the Washington Boulevard (U. S. 1). Connections are made at the Glen Burnie Bypass and at the Baltimore Beltway, under construction as a 40-mile limited access belt route around the city. Other connections are made at numerous city streets.

On the north it connects with the proposed Northeastern Expressway, to be constructed to the Delaware line.

BUILDING THE DOUBLE TUNNEL

The twin-tube structure was considered a marvel of modern engineering. It was built by the open-trench method, which means that prefabricated tunnel sections were sunk in a trench dredged in the river bed and the sections joined together under water.

Each of the tunnel's 21 twin-tube sections is 300 feet—the length of a football field—and was built in shipyards and launched like a ship.

There are today some 16 subaqueous vehicular tunnels in operation or under construction in the United States and in Europe. About one-half of these were built by the trench method and the other half by the shield method. Where conditions are favorable the trench method is preferred by engineers both because of the lower cost of construction and because of the absence of the health hazard of compressed air inherent in the shield method. New York's Hudson tubes were built by the shield method, bored through rock and other materials below the bottom of the Hudson River.

LARGEST TRENCH-TYPE TUNNEL

Conditions at Baltimore were considered favorable for the trench method and the Baltimore Harbor Tunnel became by far the largest



The tunnel sections, each the length of a football field, were towed to this shape-up basin in Fairfield. Here much of the interior work was done, including the laying of the roadway.

roadway was laid. When the sections became so heavy that they were barely awash they were then ready for sinking into position beneath the harbor floor.

The section of trench previously dredged across the harbor was carefully prepared with a foundation course of sand and screeded to exact grade at the bottom of the trench. The tunnel sections were aligned by means of temporary masts which projected above the water surface. They were lowered under control of derricks and the end-to-end sections were joined by steel pins, wedges and steamboat ratchets placed and adjusted by divers.

HOW FRESH AIR IS BROUGHT IN

All of this is an intricate procedure but the real trick in building a vehicular tunnel is the ventilating system—provision for removing the noxious fumes of thousands of automobiles constantly using the facility.



Mr. Singstad

And that brings Ole Singstad into the picture.

Senior partner in the New York consulting engineering firm of Singstad & Baillie, he is considered the world's greatest authority on vehicular tunnels. He was brought to Baltimore to design and furnish field engineering supervision and inspection for the harbor project, under contract with the Roads Commission.

Singstad had devised a new tunnel ventilating system for New York's Holland Tunnel in the 1920's and he adapted it for use in Baltimore.

trench tunnel project ever built. It is 6,300 feet long and has four lanes of traffic, whereas all other vehicular tunnels built by this method in the United States have but two lanes.

After the welded structural steel sections were launched at the shipyards, they were towed to a shape-up basin on the south side of the harbor. Here exterior protective pneumatic mortar was placed on the steel shells. At the same time interior concrete was poured as a lining and the rough base of the

The ventilation plans provided for the erection of one ventilating shaft and building at each terminus of the tunnel. Fresh air is supplied through a duct under the roadway distributed through air flues placed at close intervals along the tunnel on each side just above the roadway.

Foul air is drawn off into the duct above the tunnel ceiling. Motor-driven fans that supply the fresh air and draw off exhausted air are located in the two terminal ventilating buildings.

SINGSTAD: TUNNEL TO LAST 1,000 YEARS

Ole Singstad took a great personal interest in the project. He was in Baltimore frequently and liked to see for himself how each phase of the job was progressing. When State authorities were planning a celebration at the time of the sinking of the first tunnel section, with Governor McKeldin personally at the winches, Singstad caused nine postponements of the event because he was not satisfied with the grade of sand spread along the bottom of the tunnel trench.

"After all," he said, with a twinkle in his eye and in his rich Norwegian accent, "nothing is too good for Baltimore. I am building you a tunnel to last one thousand years."

Contract for the building of the tunnel was let by the Roads Commission in March 1955 to Merritt-Chapman & Scott Corporation at its bid price of \$29,894,081.

SIXTEEN MILES OF APPROACHES

The approach expressways, which in mileage are ninety percent of the project, are limited-access dual highways cut through some of Baltimore's most highly congested industrial and residential property. All in all, they run 16 miles in length.



The wet pavement of the Tunnel toll plaza shines after a night rain. There are fourteen toll booths. The Administration Building, headquarters of the Toll Facilities Division, is in the left background.

The interchanges were designed so that when a motorist once enters the facility he cannot get off until he has passed through the tunnel (and particularly the toll booth). However, having once crossed under the river, the traveler may exit at one of several interchanges or may continue on to the terminus.

The approaches required the following structures: six bridges,

thirty-six highway grade separation structures and nine railroad grade separation facilities.

The roadways have wide pavements in each direction with adequately surfaced shoulders. The median divider is 40 feet wide in rural areas and 4 feet (concrete curb) in urban areas.

Approach grades are limited to a maximum of three and one-half percent. Design speed is 70 miles per hour for rural areas and 60 for urban. Actual speed limits are 60 in open areas, 50 in the city and 45 through the Tunnel.

FOUR TOLL STRUCTURES OPERATE AS UNIT

All four of Maryland's toll facilities are managed as a unit by the Maryland Roads Commission. The annual estimated cost of maintenance and operation, including payments made to the Operations Reserve Fund, for the fiscal year ending September 30, 1959, is as follows:

Tunnel -----	\$1,293,500.00
The three bridges -----	924,000.00
Administrative expenses chargeable to the four toll facilities -----	265,500.00
	<hr/>
Total -----	\$2,483,000.00

Consulting engineer on the project was J. E. Greiner Company, of Baltimore. The Commission's toll facilities department is managed by Louis J. O'Donnell.

LIKE RIDING THROUGH A PARK

White marble steps are a thing of the past to travelers through Baltimore, for the approaches to the Baltimore Harbor Tunnel will feature landscaping the like of which is now seen only on Connecticut's Merritt Parkway.

Desirable from an esthetic point of view, practical considerations for the extensive landscaping include reduction of on-coming headlight glare; screening of unsightly views; blending the character of the roadway with that of the contiguous countryside; assistance in the stabilization of side slopes to prevent erosion; and lessening of traffic noise.

THRUWAY A GREAT TRAFFIC SUCCESS

The tunnel was instantly successful from a traffic point of view. It was authoritatively reported that up to 40 percent of the truck traffic was removed from certain streets in Baltimore.

Tolls were set at 40 cents for a passenger car and proportionately higher for other vehicles.

A SECOND TUNNEL?

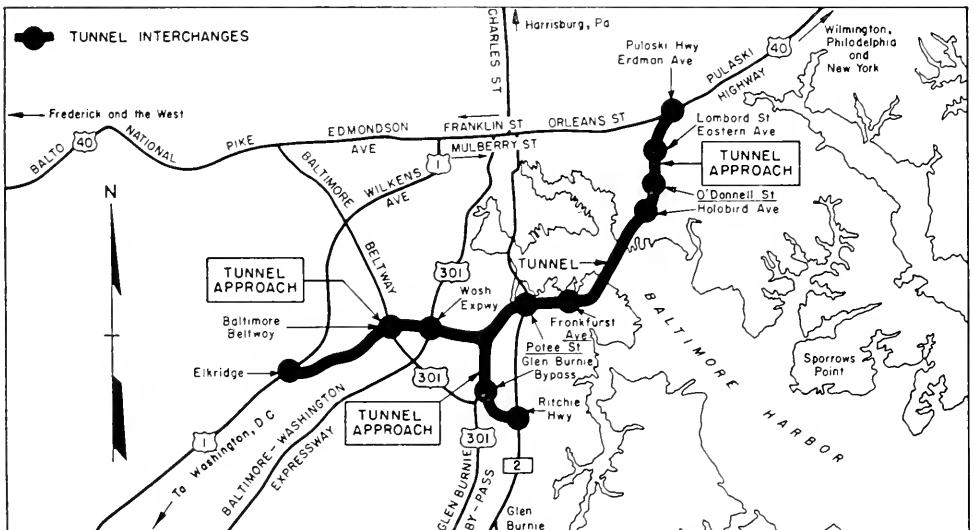
Before the first or honeymoon year of the Tunnel had closed, Roads Commission officials were making studies for a second tunnel across the Patapsco downstream from the first.

The site is between Hawkins Point in the Marley Neck section of Baltimore City and Sollers Point in the Dundalk area of Baltimore County. While the proposed facility will not be needed for ten or more years, according to present forecasts, engineers see it as a logical extension of the Baltimore Beltway to make a complete loop around the city.

Such a structure, together with its approaches, in effect would form the buckle of the belt, the device that ties the whole Beltway together.

Accordingly, the Roads Commission secured an option on 15.6 acres at Hawkins Point for a future southwest entrance to a second tunnel, if and when.

Experience had taught that in road right-of-way matters, it pays to have the eye cocked some years into the future.



How the Tunnel system broke the Baltimore bottleneck.

Chapter XXII

THE NEW TECHNIQUES

Of all the changes in the first fifty years of the Roads Commission, none has been more spectacular than the development of new methods and equipment in design and construction.

These include the electronic computer, the tellurometer, photogrammetry, the use of pre-stressed concrete and a variety of new road-building machinery.

All of these have developed since World War II and some so recently that their potential cannot yet be appraised. Their future use is vast and unlimited.

For two thousand years prior to the Twentieth Century, road-building techniques remained practically static.

THE APPIAN WAY—HAND-MADE HIGHWAY

The most famous and durable piece of early road-building was the Appian Way, a 400-mile superhighway across southern Italy, part of which is still in use.

MACADAM ROADS

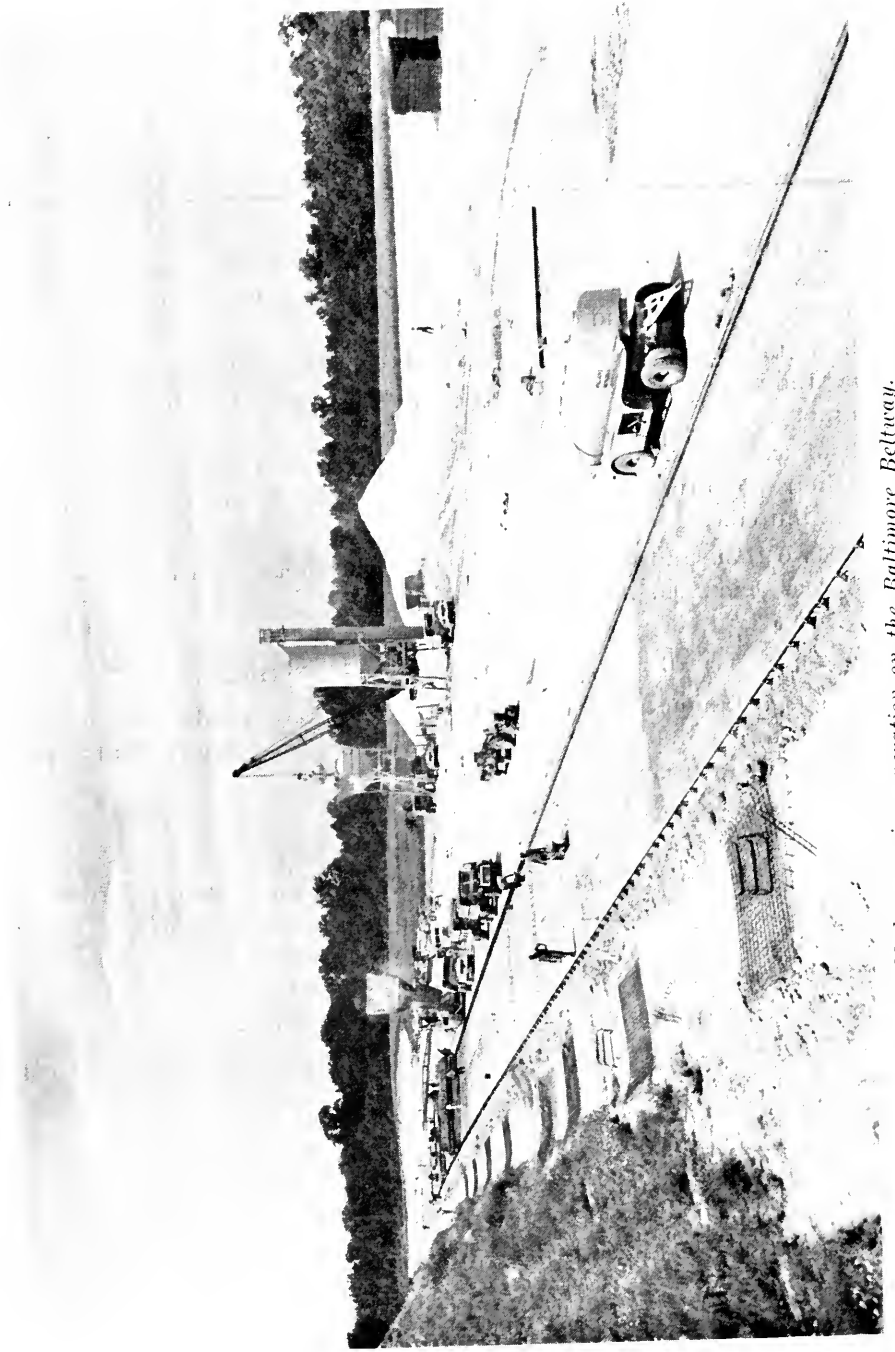
In 1816 a Scotsman, John Loudon McAdam, was appointed road supervisor at Bristol, England, and developed the process which bears his name. McAdam used men to lift the heavy stones and women and children to break them to six-ounce size by hammer.

But no new road-making tools had been invented.

The National Road was built in Western Maryland in 1811 by picks and shovels.

MCADAM'S "MOUTH TEST" FOR STONES

The McAdam principle rested on the use of these small stones throughout, laid on a prepared roadbed and compacted to a thickness of from six to nine inches. He issued orders that each stone should be small enough



Modern paving operation on the Baltimore Beltway.

to fit into a man's mouth; and road foremen were instructed to test material in this manner.

One day, on an inspection trip, McAdam saw a large pile of stones far in excess of his prescription of six ounces. He called to the foreman and asked why these stones had not been given the mouth test. The foreman said they had and, as McAdam recounts it, "he opened a mouth of extraordinary capacity and completely devoid of teeth, the largest such cavity I had ever seen."¹

After that, McAdam made a number of two-inch rings which were issued to the foremen for testing the stones. These two- and three-inch rings became standard practice for macadam roads.

It was a common sight on the Boonsboro Pike and other early American roads in the 1820's to see men sitting on the ground breaking the stones small enough to pass through their rings.

THE ROCK CRUSHER AND THE STEAM-ROLLER

By 1900 this hand method of breaking stone had been supplanted by mechanical rock-crushers. Carroll County owned one and Frederick had four, each of which cost \$700.²

In addition, the road-rollers were now pulled by oxen—and sometimes by horses or mules.

The principle of the steam engine had been applied to these machines and in 1900 there were four "steam-rollers" in Maryland, but the reports say "only two of these, those owned by Baltimore County, have been used to any extent upon the county roads."³

Otherwise, the road machinery was picks, shovels, hammers, sledges, scrapers and a few hand scoops, the same equipment used by the Romans.

REVOLUTION IN ROAD BUILDING

The application of power machines to road construction is almost entirely a development of the past fifty years; and the most effective of these have appeared in the past ten.

War, ever a stimulus to scientific advance, has left its imprint in this century on Maryland road-building.

While the tractor principle was not new in the second decade, nevertheless the primitive tank of World War I led to the crawler tractor in

¹ Devereux, *Life of John Loudon McAdam*, Oxford Press, New York (1936), pp. 49-63.

² Geological Survey Reports, Vol. III, pp. 225, 233.

³ *Ibid*, page 259.

road construction in the Twenties. Power shovels appeared—heavy, slow copies of earlier steam-driven rigs; and trucks supplanted horse-drawn wagons for hauling stone.

THE BULLDOZER LEADS THE WAY

During the Thirties diesel engines were developed, together with many different types of dig-and-carry scrapers.

But World War II produced the machines which fathered the road-building implements of today; and chief of these was the modern bulldozer.

This useful and ever-present gadget was nothing more than a tractor with a metal blade attached to its nose. But in wartime it cleared the beaches, hauled artillery, built airstrips almost overnight and used its blade as a shield against bullets.

Admiral Halsey said the bulldozer was one of the four machines that won the War in the Pacific.⁴

Since the War the horsepower of these modern juggernauts has nearly doubled; yet power-steering has made them easily maneuverable.

MOBILE ASPHALT PLANTS AND CONCRETE FINISHERS

Led by the versatile bulldozer, a whole squadron of new and powerful machines has marched on the Maryland roads system, leveling mountains, filling valleys and paving the long, sleek sections of the new highways.

Earthmovers with 27 cubic-yard capacities race across the raw ground at speeds up to 28 miles an hour. Tractors are moved from place to place by heavy transporters, with diesel generator to power electric motors for each wheel.

Portable crushers, fed by drag-line buckets, now convey, crush and screen up to 450 tons of gravel and sand an hour.

Mobile asphalt plants, driven to the site and set up by one man, deliver blacktop mix to waiting trucks. Float finishers move by their own power over newly-poured concrete, smoothing road surfaces and replacing four to six hand-finishers.⁵

And this seems to be just the beginning in a revolutionized industry as the new federal interstate highway program unfolds.

ROADS COMMISSION MAINTENANCE KEEPS PACE

The Roads Commission in its maintenance work has kept pace with the highway contractors in the use of modern equipment. In 1910 it had nine

⁴ *Time Magazine* (June 24, 1957)

⁵ *Constructioneer* magazine (May 19, 1958); *Time*, supra.

road-rollers and four stone-crushers⁶ but most of its tools were similar to those used in the building of the Appian Way.

In 1958, with 2,773 pieces of equipment,⁷ it is one hundred percent mechanized and its physical plant compares favorably with that of any state highway department.

ELECTRONIC ROBOT AIDS ENGINEERS

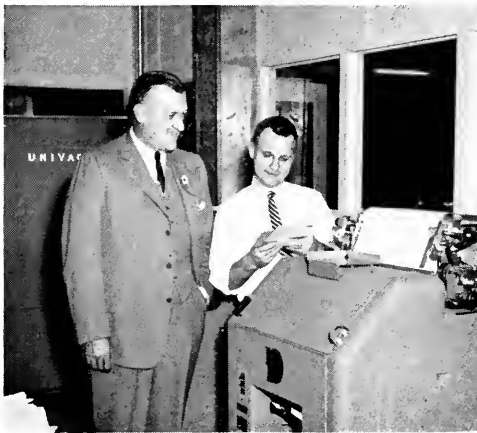
As an aid in executing huge new road programs without a corresponding increase in personnel, the Roads Commission has eagerly turned to the products of modern science. One of the most promising is the electronic computer which was installed in the Road Design Division in 1957.

As an example of what this mechanical brain can do, the engineers cite its proficiency in earthwork computation. For instance, a test on a 12-mile section of new highway containing a deep cut showed amazing results.

The manual method required 750 man-hours of laborious calculation. The electronic computer did the job in 75 man-hours, including 16 engineering man-hours, 54 non-engineering man-hours, four hours of computer time and one hour of listing time—a ninety percent man-hour saving. A similar saving has been noted in tests on design problems.

In studies for relative stiffness and other factors in continuous structural beam characteristics, the engineers find the new machine an even more spectacular time-saver. The old method consumed 40 man-hours of an experienced structural engineer. The computer can do the job in 54 minutes — one-forty-fourth of the manual time.

In the short time the computer has been in use its work has been effective mainly in calculating earthwork: profile grade and pavement edge elevations for use on both single and dual-lane highways. However, its scope has been extended to verification of contractors' bid, cost analyses for construction items, estimates of costs



Governor McKeldin inspects a section of the new Univac.

⁶ SRC 1908-12, page 49.

⁷ SRC Equipment Division Records.

of State projects, traverse work for the Location Division, calculation of tests of soil samples and analyses of origin and destination traffic studies.

The Traffic Division is planning to use the machine for computing and tabulating commercial vehicle-mileage, gasoline consumption and registration fees paid. The Accounting Department has developed a program for computing and tabulating the accumulation of various costs of operating equipment. Many other uses are anticipated as the full potential of this revolutionary calculator is developed in the future. Its use and development is in general charge of Philip R. Miller, an associate engineer of the Roads Design Division.⁸

AIR PHOTOS HELP BUILD ROADS

One of the new techniques developed in the last few years is the use of aerial photography and photogrammetry in the preparation of plans for the new highways.

The first such project in Maryland was the Rising Sun bypass, a three-mile relocation of U. S. 1, opened in 1957.

Photogrammetry is of great value in the preparation of engineering reports on several alternate lines through difficult terrain conditions. For instance, in the mountain areas of Western Maryland, it would take many months to send survey parties to make even the roughest of reconnaissance surveys; and in winter months it would be practically impossible to get through. A basic survey of these difficult areas can be made by aerial methods in a matter of weeks with the basic map prepared by photogrammetry. Engineers can locate a number of alternate lines between desired terminal points and compute quantity estimates on all the lines in a reasonably short length of time.

Drainage patterns and accurate drainage areas can be determined from these maps and the drainage analysis in turn is a major aid in helping to place a proposed line in its most favorable position.

Very often a mosaic of the area in question is an invaluable help in a study of the properties in the early stages of route planning. Property lines are easily distinguished on these mosaics and with minor inquiry in the area and reference to tax maps, a good preliminary property-mosaic can easily be prepared.

With this in hand, the engineer studying the preliminary location can set a line which will cause the least amount of damage to the properties involved.

⁸ *The State Roadster*, a monthly employees' publication of the Roads Commission, Vol. I, No. 12 (June 1957); Vol. II, No. 6 (December 1957); Vol. II, No. 10 (April 1958); Vol. II, No. 11 (May 1958).

Aerial photographs are also of great help in an appraisal of raw material supply for road building needs. Interpreters who are trained in the art and who have a good knowledge of geology can pick out locations of various deposits, such as gravel and sand, which are either useful or detrimental to road building activities. By skillful interpretation, areas of very poor soil can be avoided and areas of satisfactory soil traversed.

In addition, the sites of suitable sources of borrow—the additional earth needed and which is not on the selected route—can be located.

USE OF PRE-STRESSED CONCRETE

The first highway bridge built in Maryland with pre-stressed concrete, and one of the first in the United States, was the Shawan Road overpass of the Harrisburg Expressway, erected in 1954.

If you move a half-dozen books from one shelf to another, you squeeze the end books so the center ones will not fall out. This pressure induces compressive stresses throughout the row and the books can be lifted as a unit even though the center volumes are unsupported.

Simply stated, this is the principle of pre-stressed concrete, a process which adds strength and durability to the beams while at the same time reducing the amount of reinforcing steel required.

Pre-stressed concrete can be “pre-tensioned” in a factory and hauled to location, like the pre-fabrication of housing units. Both the Princess Anne and the Flintstone bypasses, now under construction, have bridges built in this manner.

On larger structures the result is usually obtained by “post-tension” with the work done at or near the site of the bridge. The Shawan overpass was an example of this latter method.

The Roads Commission has designed and constructed about fifteen pre-stressed concrete bridges; and five similar structures are now under construction or design. This new use of concrete affords durable and esthetic structures at a cost which compares favorably with bridges built of other materials.

ELECTRONIC SURVEYING—ANOTHER MARYLAND FIRST

George Washington, who was something of a surveyor himself in his younger days, would not recognize the new electronic equipment which is supplementing the old-time rod-and-chain method of surveying.

The Tellurometer—from the Greek words meaning “earth and “measurement” is a radar-type device enabling engineers to save both time and money in measuring distances and plotting the new highways.



Surveying—the old and the new methods.

In 1957 engineers from the Union of South Africa introduced this equipment into the United States. It was designed primarily to meet requirements of geodetic accuracy.

The Maryland Roads Commission was the first—and one of three highway departments in the nation—selected by the federal Bureau of Public Roads to determine the tellurometer's usefulness in conjunction with surveys pertinent to the highway system. These experiments are continuing under the Roads Commission's Traffic Division.

The tellurometer is extremely accurate and it saves both time and money. The Bureau of Public Roads estimates at least a sixty percent saving in cost over the conventional triangulation or traverse studies.

The Roads Commission's experiments with this new device began in 1958 with equipment it is purchasing for \$15,000, under an arrangement by which the Federal Government will pay the major part of the cost.

This is another example of how modern science is helping build the new road system of America—and how the Maryland Roads Commission is moving swiftly to take advantage of each new technique as it develops.

Chapter XXIII

THE COMMISSION'S LAWYERS

Of all the Roads Commission's sub-divisions, the Legal Department is the only one over which it has no direct control.

The Commission's lawyer is the Attorney General of the State and, through him and by his appointment, a Special Assistant Attorney General is assigned to the Roads Commission.

In private business the owner not only may select his own lawyer but may disregard his advice or even fire him if he chooses. But in Maryland, all state departments are bound by the official opinions and rulings of the Attorney General's Office.

The State Roads Commission seeks the advice of its Special Assistant Attorney General on many matters. Often the legal opinions are merely advisory. On important or controversial legal matters the Commission frequently requests an official opinion from its Legal Department and in these instances the legal opinion thus rendered must be followed, since an official opinion of the Attorney General has the force and effect of law unless it is overruled by a court of record.

The Roads Commission is a multi-million-dollar business enterprise with many more legal problems and court appearances than most of our largest corporations, due to its public nature. Therefore it might be expected that this anomalous situation would cause frequent friction between client and attorney.

Yet there is no instance, throughout the entire period of nearly half a century, of any major conflict or friction between the Commission and its statutory legal advisor.

As a matter of fact, during 14 of the 42 years that this unusual arrangement has been in force, including the present time, the Attorney General has been a member of a different party from the Governor who appoints and is responsible for the roads commissions.

The Roads Commission has kept to its field of policy-making and construction. The Attorney General's office has called the legal balls and strikes.

That the system has worked so well is a tribute both to the many roads commissioners and to the lawyers assigned to advise them.

In 1908 the legal set-up was different. The Roads Commission, like other state agencies, employed its own counsel. The first was Carville D. Benson, a distinguished attorney of his day. His fees and expenses for all legal work from 1908 to 1912 amounted to \$6,243, including drafting of the state roads bill, nursing it through the Legislature and all services for the first four years.¹

Legal fees as well as road-building costs were lower in those days.

When the Goldsborough Commission came into office in 1912 it retained a new lawyer, Leon E. Greenbaum, a prominent Baltimore attorney.

In 1915 Albert C. Ritchie was elected Attorney General of Maryland. Through appropriate legislation he provided for the abolishment of all private counsel for state departments and the substitution of the Attorney General as their sole legal advisor. He established the present State Law Department on October 1, 1916.²

Since the new system multiplied his work, he appointed a small staff of assistants to help him. Before Ritchie, the many distinguished Attorneys General, an office which dates back to colonial days, had operated from their own law offices on a part-time basis.

His first assistants included Philip B. Perlman, who later became Solicitor General of the United States, and the late Ogle Marbury, who became Chief Judge of the Maryland Court of Appeals. These men were among the first to handle Roads Commission affairs under the new system.

The first Special Assistant Attorney General assigned exclusively to Roads Commission affairs was John B. Gray, Jr., appointed in 1931. He is now a judge in the Southern Maryland counties. He was followed in 1935 by the late Thomas M. Jenifer who instituted the annual reports of the office and also first codified the state roads laws.³



Mr. Buscher

The late Edmond H. Johnson served the Commission from 1940 to 1943 when he was appointed judge in the lower Eastern Shore counties. He was succeeded by K. Thomas Everngam and later by Robert E. Clapp, Jr. In 1942 Fred A. Puderbaugh became the first special attorney and has rendered continuous service since then.

With the steady growth of legal work connected with

¹ SRC 1908-12, page 48.

² Acts of 1916, Ch. 560; Report and Official Opinions of the Attorney General, Vol. I (1916).

³ SRC 1935-36, page 116.

the expanding program and especially with land acquisition matters, the Legal Department today consists of eight special attorneys headed by the Special Assistant Attorney General, Joseph D. Buscher.

Originally appointed in 1949 by Attorney General Hall Hammond, Buscher has been re-appointed by successive legal chiefs and is regarded as a man it would be very difficult to replace.



Typical overhead direction signs.

Chapter XXIV

THE MULTI-COLORED FACETS OF THE TRAFFIC DIVISION

For sheer variety of functions, the Traffic Division sets a fast pace for the other departments of the Commission.

Although a relatively youthful branch of the Roads unit, it performs one of its oldest and most painstaking tasks, the preparation of accurate road maps.

At the other end of the scale it also does the field work involved in a continuing physical inventory of the roads—basic not only to orderly highway planning but to the meticulous art of the map makers.

STOP AND GO SIGNS

In between these varied duties, Traffic dabbles with the primary colors so familiar to motorists and so vital to safe passage on the highways—the green, the red and the yellow. For it is responsible for the location, erection and maintenance of all the automatic traffic signals on the state system.

It also plans and locates all other signs on the roads, such as the many “Stop” signs at principal intersections and the “miles-per-hour safe speed” signs at certain curves.

SAFETY IS ITS BYWORD

In addition, it makes traffic studies in incorporated towns, maintains automatic and manual traffic-counter stations all over the State, reviews plans for access to the state roads from private businesses such as shopping centers, and maintains a uniformed patrol force, part of which is on duty every hour of the week on the lookout for overloaded trucks.

The main purpose of the Division is traffic safety. Quietly and efficiently, it is on the job every day in the year to keep traffic moving steadily, expeditiously and—most of all—safely.

FOUNDED IN 1940

The four-year planning survey made for the Roads Commission in the late Thirties furnished a physical inventory of every mile of Maryland road and has been the basis of all later improvement programs.

To keep this information up-to-date, and to perform other related functions, the Traffic Division was founded in 1940.¹ Its first director was William F. Childs, Jr. who had managed the survey during its last two years. When he became Chief Engineer in 1948, George N. Lewis, Jr., who had been Childs' principal assistant, was made Director of the Division.

COLONIAL TRAFFIC SIGNS CUT INTO TREES

One of the more practical functions of the Traffic Division is its planning for highway signing and marking. While the motorist today takes adequate road signs for granted, they are almost entirely a development of the past 35 years.

The first Maryland law requiring roads to be marked was passed by the provincial Assembly in 1704. It required directional signs to be hacked on trees by axe-blade.

Roads leading to churches or a county courthouse "shall be marked on both sides the road with two notches," the Act specified, while roads leading to a ferry "shall be marked with three notches." All roads leading to Annapolis had to be marked with two notches plus the letters "AA" set with marking irons—and colored. The notches, said the law, "shall be marked on the face of the tree in a smooth place cut for that purpose."²

This method of directing travelers was crude but effective and the custom persisted for many years in Maryland. In fact, one road in St. Mary's County is still known as Three Notch Road, although the particular ferry to which it led is lost in the limbo of the past.

The great National Road built as a freeway by the federal government was well marked. The distances were indexed by mileposts all along the way showing the mileage from both Cumberland and Wheeling. Some of these 150-year old milestones are still in service.

FORTY GATES TO WASHINGTON

During the dark ages of the roads following the coming of the railroad, travel on the public ways was not only unmarked but was definitely discouraged in many places.

¹ SRC 1941-42, page 61.

² Geological Survey Reports, Vol. III, page 120.



Still standing, this is one of the original markers on the National Road west of Cumberland. It was erected in 1815.

Since many roads ran through large estates, property owners frequently erected gates across the roads to keep their cattle from wandering away. They found it easier to confine stock in this way than to build fences on each side of the road.

Thus the traveler was frequently compelled to get down from his vehicle, open a gate, drive through and then go back to close the gate. In 1858, for example, it was necessary to open forty gates across the main road in traveling from Upper Marlboro to Washington, a distance of about fifteen miles.

By 1900 such gates were banned by law in some counties and permitted in others only upon payment of a fee, as for example one dollar a year in Kent County. And in some counties local laws required the County Commissioners to erect "guide-boards" to direct the traveler.³

SIGN POSTS USED AS TARGETS

But even where special laws required sign-boards at cross-roads, the system was generally ineffective because of wide-spread vandalism. Almost as soon as guide-posts were erected they were hauled down and carted off as souvenirs or for firewood.

Those that remained were frequently used as targets by trigger-happy farm boys.⁴

The authorities despaired of replacing them, for experience showed it was usually a waste of public money; so the roads of Maryland remained in most places completely anonymous down to the days of the State Roads Commission.

The traveler had to pick his way by compass or instinct—or ask the farmer.

MODERN ROAD SIGNS

The modern marking of the Nation's highways dates from the mid-1920's when a uniform system designed for the country was adopted by the several state highway commissions under the leadership of the American Association of State Highway Officials. These included the "U. S."

³ Geological Survey Reports, Vol. III, page 339 (footnote).

⁴ Geological Survey Reports, Vol. III, pp. 339, 434.

numbers on special highways of an interstate character, such as U. S. 40 and U. S. 1.

Other state highways not U. S.-numbered are given state numbers, as "Md. 2" (the Ritchie Highway) and "Md. 410" (East-West Highway in Montgomery and Prince George's counties).

Soon a new and different road sign will be added to the Maryland scene: the U. S. Interstate Highway designation for the new expressways being built under the Federal-aid Highway Act of 1956.



This route marker will designate the proposed Northeastern Expressway and the new interstate road between Baltimore and Washington.

Maryland was one of the first states to provide adequate roadside marking. In the early twenties the Roads Commission inaugurated a comprehensive system of directional and distance signs at crossroads throughout the State.

FIRST SIGN SHOP

The manufacture of these early Maryland road signs was by outside contract. However, in 1930 the Commission established its own sign shop. The first signs made resulted from passage of the Boulevard Act of 1929 which required persons entering from a side road upon a designated principal thoroughfare to come to a full stop. The sign shop made and installed throughout the State thousands of "Stop-Thru Traffic" signs.⁵

In 1938 the Commission began replacing the square directional signs of the Twenties with the rectangular signs in use today.⁶

The sign shop has manufactured, painted and refinished many thousands of road signs throughout the State. It also operates a paint crew and is responsible for the white center lines and the other markings seen on modern highways.



The Traffic Division is responsible for all road signs and markings on the state system. Here the Ritchie Highway is being painted with edge stripes for safety.

⁵ SRC 1927-30, page 98.

⁶ SRC 1937-38, page 19.

White lines at pavement edges, a safety experiment tried first in Maryland in 1954, is rapidly being extended on principal highways generally. It has been found a potent safety factor.

Currently, some 24,000 gallons of white paint are being used annually down the center of 2,500 miles of pavement and along the edges of 350 miles of dual highways.

The sign shop is under the direction of Louis S. Pfarr whose title is Supervisor of Highway Markings. It is a part of the Maintenance Division but much of its work is directed by the Traffic Division.

COMING OF THE TRAFFIC LIGHT

The first automatic traffic light made its appearance on the state roads system in the late twenties. It was erected in the heart of Glen Burnie at the intersection of Crain Highway (U. S. 301) and old Annapolis Boulevard (State Route 648). For many years it was the only one in the State.

The present extensive system of traffic lights began in 1937 when the Commission installed five, three of which were on the Washington Boulevard (U. S. 1). The following year it erected 22 and the practice has grown with the increase in traffic.⁷

The Traffic Division today maintains 253 automatic traffic lights throughout the State.

ON THE LOOKOUT FOR OVERLOADED TRUCKS

The Traffic Division also has the job of enforcing the truck-weight laws of the State.

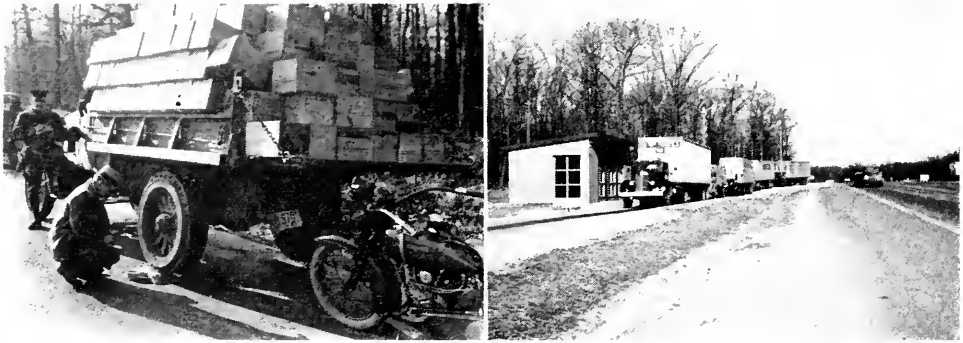
This operation is conducted through four permanent weighing stations and a "floating" truck patrol consisting of sixty men.

Of some 900,000 trucks now weighed each year, less than one percent is found to be overweight.

Upon trial and conviction, the offending carrier is fined at the legal rate of two cents a pound for the first 5,000 pounds of overweight and six cents a pound for overweight in excess of 5,000.

The purpose of the law is not to produce revenue, however, but to protect the highways. During World War I severe damage was inflicted on the main routes by heavy army vehicles. The Roads Commission met the problem in two ways. It rebuilt the highways with wider and heavier pavement. It also recommended laws limiting truck weights.

⁷ SRC 1937-38, page 66.



Left photo shows a 1927 truck weighing operation by portable scales. Right, the busy weighing station at Foy's Hill in Cecil County opened in 1954.

These laws were duly passed and the first permanent scale house for weighing loaded trucks was erected in 1924 on the Washington Boulevard, near Elkridge.

In 1930 the Commission said: "More damage is done to the highways by the overloaded vehicle than from any other one cause."⁸

The success of the Commission's truck-weighing program is largely psychological. The presence of weighing stations and mobile crews constantly roaming the roads has a strong deterrent effect on truck owners tempted to throw on a few extra thousand pounds.

The Truck Patrol consists of fifteen crews, each containing two uniformed patrolmen and two semi-skilled laborers. Some of these crews operate as mobile units on schedules which vary from day to day both as to time and location. The element of surprise is a strong factor in their work.

Other crews are stationed for varying periods at the permanent weighing stations.

All of these stations now in service have been constructed in the past six years and are equipped with the most modern weighing machinery. They are located at Foy's Hill in Cecil County (U. S. 40), Pine Orchard in Howard County (U. S. 40), north of Salisbury (U. S. 13) and south of Upper Marlboro (U. S. 301).⁹

"O AND D" STUDIES

Among the many activities of the Traffic Division are the "origin and destination" studies made under actual traffic conditions to determine the need of specific new or proposed travel routes.

⁸ SRC 1927-30, page 97.

⁹ State Roadster, Vol. II, No. 3 (October 1957).

In 1953, for instance, such a program was conducted to ascertain potential traffic on the Baltimore Harbor Tunnel Thruway, opened in 1957. Motorists were stopped and questioned on all major arterial routes leading into Baltimore. Operating with teams, each composed of fifteen men working on shifts around the clock, the Traffic Division obtained 670,000 interviews from motorists passing through the interview stations. This field study required eleven weeks and developed information on where motor car operators came from and whether their destination was beyond Baltimore or in it, and if so where in the City.¹⁰

From the data so gathered, traffic experts were able to determine with surprising accuracy the number of motorists who would use the Tunnel facility. In fact, the approximate rates of tolls necessary to finance the project were computed from this information long before the actual work on the Tunnel was started.

In 1955 a similar study was made for the Northeastern Expressway, for the purpose of ascertaining its traffic potential and also whether it could be profitably operated as a toll road.¹¹

The Traffic Division, in close cooperation with the Bureau of Public Roads, Highway Research Board, University of Maryland and other institutions and agencies interested in traffic operations and traffic safety, has participated in a number of research projects in this field.

PUBLISHES GUIDE BOOK

In 1955 the Division published a manual of Traffic Control Devices used to guide state and local police and highway officials in the proper signing and marking of streets and highways, a definite factor in promoting highway safety.¹²

A report on traffic engineering activities of the Roads Commission is made each year to the National Safety Council; and in 1954 it was awarded second place in its group (northeastern states) for its record of traffic engineering achievements.¹³

Again this year it received an award for its outstanding traffic engineering program from the Institute of Traffic Engineers for the year 1957.

COUNTING THE CARS

The Division now maintains thirty traffic-counter stations where travel volumes are recorded each hour of the day on a year-round basis. These

¹⁰ SRC 1953-54, page 244.

¹¹ SRC 1955-56, page 230.

¹² SRC 1955-56, page 227.

¹³ SRC 1955-56, page 226.

photo-electric devices are a familiar sight on Maryland highways and provide invaluable information on the use of the roads system at various times of the day and throughout the seasons.

Through these counters the Commission knows, for instance, that in July 1948 a total of 425,300 motor vehicles used U. S. 40 at Bush River, whereas in July 1958 the figure was 886,188, a jump of more than one hundred percent in ten years.

STATE HIGHWAY MAPS

Doubtless the most popular function of the Division is the preparation and distribution each year of handsome tourist maps of the State.

MARYLAND



HIGHWAY MAP

1958

PREPARED BY
STATE ROADS COMMISSION

The first Roads Commission, in its work of laying out Maryland's initial roads system of 1,300 miles in 1909, felt the need of a comprehensive road map. However, at that time portions of at least five counties had not been surveyed, presenting a problem of no small proportion to the early map makers.

Notwithstanding this handicap, the Maryland Geological Survey in that year prepared the State's first road map and on it was laid out the first state roads system (*ante*, page 73).

The map makers reported that without complete surveys "the map had to be made from such information as could be secured, as it seemed wiser not to delay the whole map until the surveys were completed but rather to publish the best information obtainable."¹⁴

Since 1954 the back of the State map has contained photographs in color of points of interest within the State. Each year's edition has carried a different set of photographs.

At present, 200,000 of these maps are published annually and distributed free to the public.

STATE MILEAGE

Another function of the Traffic Division is keeping an accurate account of the mileage in the State system.

¹⁴ Geological Survey Reports, Vol. IX (1910), page 34.

76°30'

75°00'

Norrisville

24

136

165

White

3'

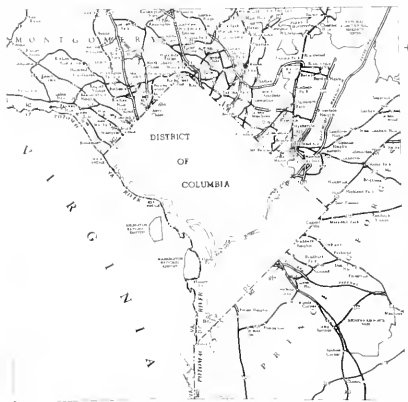
0'

P E N N S Y L V A N I A
V I R G I N I A
M A R Y L A N D
D E L A W A R E
V I R G I N I A
M A R Y L A N D
D E L A W A R E
V I R G I N I A

MAP OF MARYLAND
SHOWING
STATE ROAD SYSTEM
AS OF 1958



DISTRICT OF COLUMBIA AND VICINITY



BALTIMORE CITY AND VICINITY



In recent years an exchange system has been in effect between the Roads Commission and the several counties by which many miles of state roads have been transferred to counties and other mileage of county roads has been taken over by the State.

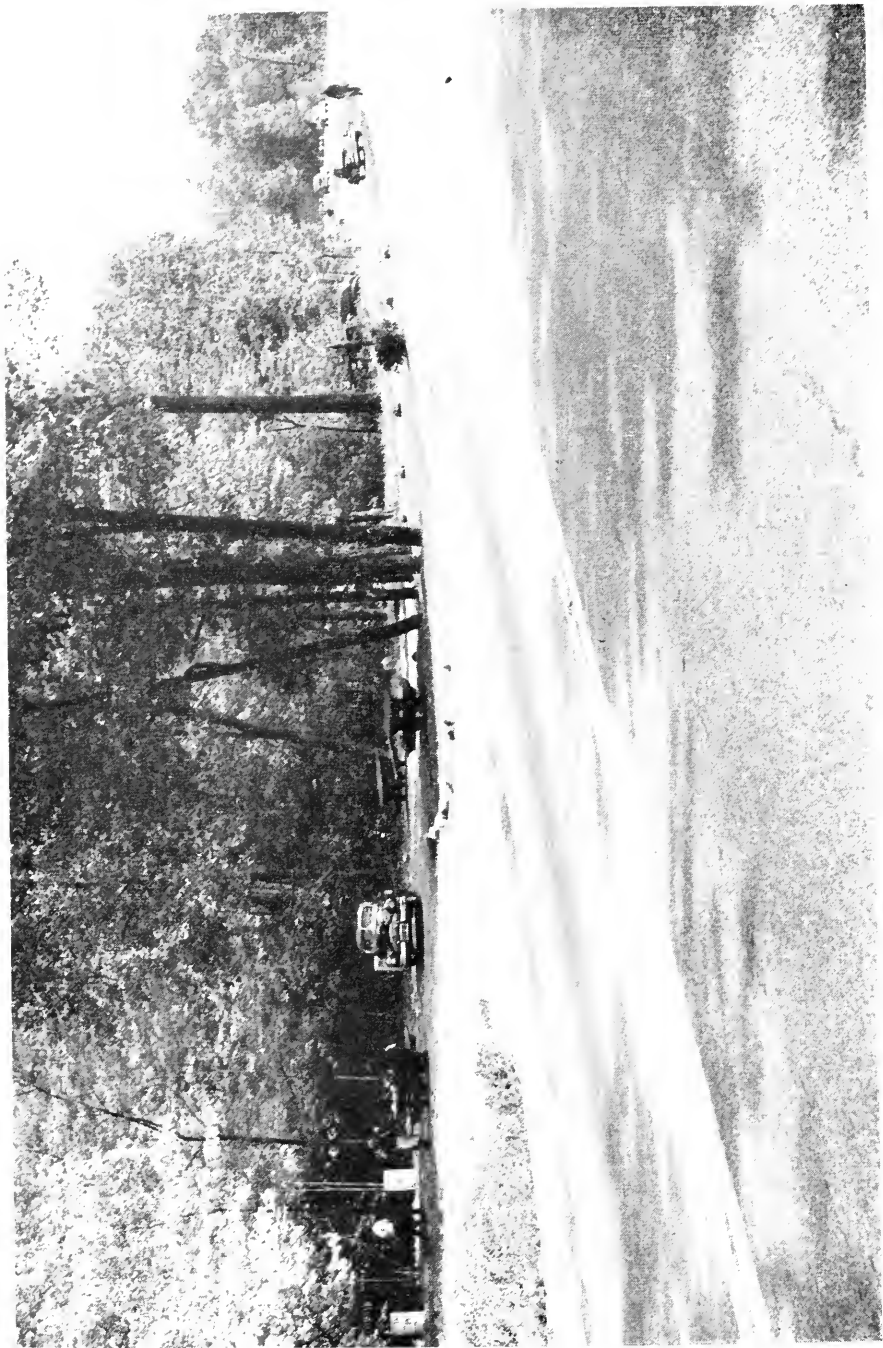
It was found that, over the years, many short sections of State highway had been built which do not now form a link in a well-integrated state-wide system. On the other hand, certain sections of county roads built in the early days now fit into a continuous routing on the State system.

To clear up this situation and to reduce maintenance costs for both the State and the counties, the program of exchange was adopted.

An interesting result of this policy is that, despite the heaviest building program in the State's history, mileage on the state roads system is actually less than it was in 1952, before the start of the Twelve Year Program.

This is because, in the execution of the exchange plan, the State has transferred to the counties 247 more miles than it has received from them.

The State system, which totalled 4,736 miles when the Twelve Year Program was prepared in 1952, now stands at 4,707 miles.



Typical Maryland Picnic Area

Chapter XXV

PICNIC SITES AND THE LITTERBUG

In 1951 Governor McKeldin asked the Roads Commission to explore the possibilities of building safe, permanent and inexpensive picnic accommodations adjacent to but entirely off the roads.

HALF A MILLION USE THEM

From this happy thought has grown the Commission's roadside picnic-area program which serves more than 500,000 people each year.

Each of these sites contains picnic tables, benches and trash cans. Some areas are small; others contain fireplaces as well as numerous tables. Seventeen are so large they are combined with fishing ponds.

NOW 100 IN STATE

All are built on state property—small excess portions taken in right of way negotiations—or on land donated to the State for the purpose. They cost little to build and maintain and their use demonstrates their popularity. They add to the safety of travel by furnishing plenty of pull-out space and parking area.

As of 1958 there were one hundred such picnic places scattered at strategic and convenient locations throughout the State, with at least one in every county.

REST AREAS OF TOMORROW

Today the Commission is investigating a new type of accommodation, the so-called "rest area" to be built along the expressways constructed under the federal interstate highway program.

The road of tomorrow will be long, straight and with no cars darting in and out of roadside establishments. On the turnpikes already in use it has been found that drivers tire of the monotony.

The rest area is a place where the motorist can pull off the road, get out and stretch, rest his eyes for a few minutes.

Present thinking is that such areas will be built every 25 miles or so on each side of the new dual superhighways, with long accelerating and decelerating lanes for safety.

This work, together with other roadside development, is under the general supervision of Landscape Superintendent Charles R. Anderson, who came to the Commission in 1958.

“KEEP MARYLAND BEAUTIFUL”

One of the most striking and effective adjuncts to the work of the Commission has been the anti-litter campaign conducted in recent years by a volunteer civic group known as the Governor’s Committee to Keep Maryland Beautiful.

The pioneer work of this body has been acclaimed nationally. It was the first such state committee to affiliate with the national movement known as “Keep America Beautiful.”



KMB operates through Boy Scout and other organizations in pushing its anti-litter campaign.

Organized in 1954, this group has been determined and unrelenting in its war on highway trash. It proceeds on the theory that tossing refuse out of a car window is a thoughtless habit, one that will be broken if a motorist is caused to think about it.

“DON'T BE A LITTERBUG”

It therefore has launched a vigorous and continuing campaign of public education aimed at making people litter-conscious. Such slogans as—“Don't Be A Litterbug,” and “Keep the Highways As Clean As Your Living Room” have flooded the State in newspapers, radio and television announcements and many other media.

ENFORCING THE ANTI-LITTER LAWS

In addition to appealing to civic pride, there is another potent weapon: enforcement of long-standing laws against highway littering. At the suggestion of the Committee, hundreds of signs have been erected by the Roads Commission warning the motorist of the penalty for throwing trash on the public roads.

The State Police have been brought into the picture in this aspect of the work.

The Committee operates through many channels, one of the most important of which is the school system. When there is a question of forming new community habits of highway neatness, the Committee believes in “getting them young.”

CLEAN-UP WEEK

While the group works on an around-the-calendar basis it concentrates on one seven-day period each spring which the Governor proclaims officially as “Maryland Clean-up Week.” Thousands of volunteers turn out to rid the roadsides, other public places and even private property of the winter's accumulation of assorted debris.

LITTER BAGS FOR EVERY CAR

Some of the most effective work is done through litter-bags for cars and gasoline service stations which furnish receptacles for emptying them.

The Roads Commission has given the Keep Maryland Beautiful group its full blessing, from the early cooperation of its public relations division to the use of its sign shop and the clean-up work of its district forces. The Commission also helps with the financing.

It is aware that the more successful the Committee becomes, the less trash will be left for the maintenance men to pick up—and the more money will be saved the State.

RESULTS ENCOURAGING

Results to date are encouraging. Current figures show Roads Commission forces collected 570 loads of trash from the highways in the first eight months of 1958, against 761 in the comparable period of 1957, a 25 percent drop. The good work of "Keep Maryland Beautiful" is credited with most of this improvement.

While countless citizens have freely devoted many hours to the work of this Committee, which was appointed by Governor McKeldin, the spark plug has been its organizer and four-year chairman, John E. Clark. He is ably assisted by Miss Phoebe Albert, the Committee's executive secretary.

Chapter XXVI

THE ROADS COMMISSION TODAY

The golden anniversary year of the Roads Commission finds it in vigorous prosecution of the most comprehensive road building program in State history.

Started in 1954 as a Twelve-Year Program, by 1958 it had become a fifteen-year plan. Cost estimates of \$568 million to finance the original plan, based on the 1947-52 cost index, had advanced by 1958 to a figure exceeding a billion dollars to cover the revised program and the cost of federal interstate projects.

The cost of building a mile of road has increased at a steady pace throughout the fifty-year period.

In building the first road system between 1909 and 1915, even \$9,000 a mile was thought too high and various expedients were tried by the Roads Commission in an effort to lower this cost (*ante*, page 56).

Today a mile of modern 24-foot road without access control and in a rural area costs about \$250,000, reflecting not only rising costs but vastly improved design standards for traffic service and safety.

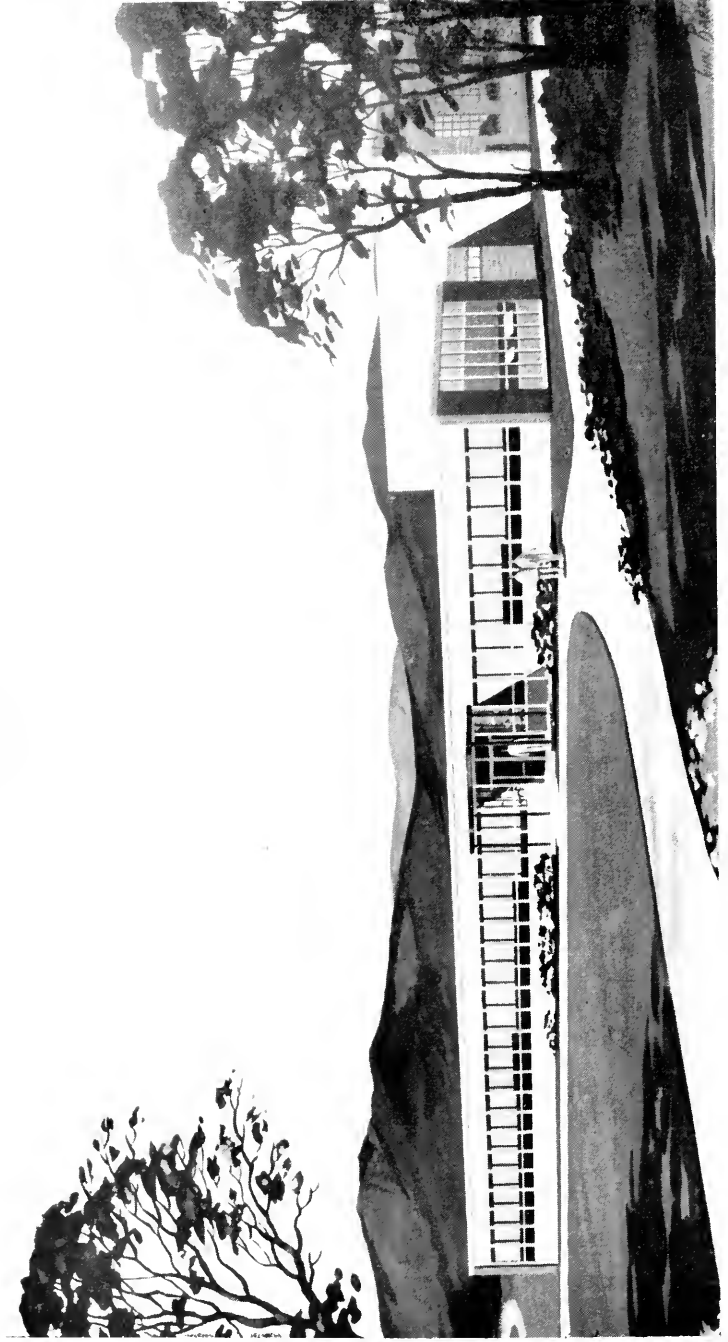


This is one of the Maryland expressways that showed "imagination in detail of design," according to the federal Bureau of Public Roads. The photo shows a section of the Washington National Pike.

MARYLAND'S MODEL ROADS

In an effort to stimulate originality in building the new interstate highway system, the federal Bureau of Public Roads in 1957 cited five examples of "imagination in detail of design." The Bureau complained of the "sameness and monotony" of most of the dual highways for which plans had been submitted.

Of the five, three were in the great-turnpike class: the Ohio Turnpike, the New York Thruway



An artist's rendering of the new District Engineer's office building at Frederick.

and the Garden State Parkway in New Jersey. The other two were in Maryland—the Baltimore-Washington Expressway and the Washington National Pike.¹ This national tribute to present day Maryland road-building is significant.

Both of these expressways were planned and built to the highest design standards before passage of the federal act of 1956. Each of the dual lanes is built as a separate roadway, fitting naturally into the landscape. Each takes full advantage of the rolling Maryland terrain through which it passes.

PROGRAM MARCHES ONWARD

The Baltimore-Washington Expressway has been completed and in service for four years.

The Washington National Pike has passed Rockville in its southward progress from U. S. 40 at Frederick and has reached the Washington Circumferential Highway, one section of which is open from Wisconsin to Connecticut Avenues.

This important link, one of the most scenic areas of the State, runs across a part of Rock Creek Park and its landscaping has been designed to parkway standards.

The Circumferential, a tightly-drawn belt highway slicing through most of the Washington suburban areas in Maryland from the Potomac north of the Capital to the Potomac across from historic Alexandria, is ahead of schedule as planned in the Twelve-Year Program, due to its inclusion in the federal interstate highway system.

PROBLEMS IN THE WASHINGTON AREA

The rapid growth of traffic in the Washington suburbs has given the Maryland Roads Commission one of its most persistent highway headaches.

Four radials leading from the City have been rebuilt in the last few years: New Hampshire, Wisconsin, Branch and Kenilworth Avenues. The latter connects with Kenilworth Interchange, opened in 1957 and the State's most complex grade separation structure. It is the meeting place of traffic originating on the Baltimore-Washington Parkway, River Road, Kenilworth Avenue and, when completed, the John Hanson Highway. This latter expressway will link Maryland's capital and the national capital. It is now in service from the Ritchie-Revell Interchange at Annapolis

¹ State Roadster, Vol. II, No. 4 (October 1957).

westward to George Palmer Highway, five miles from Washington. The last section to be completed was opened in 1957.

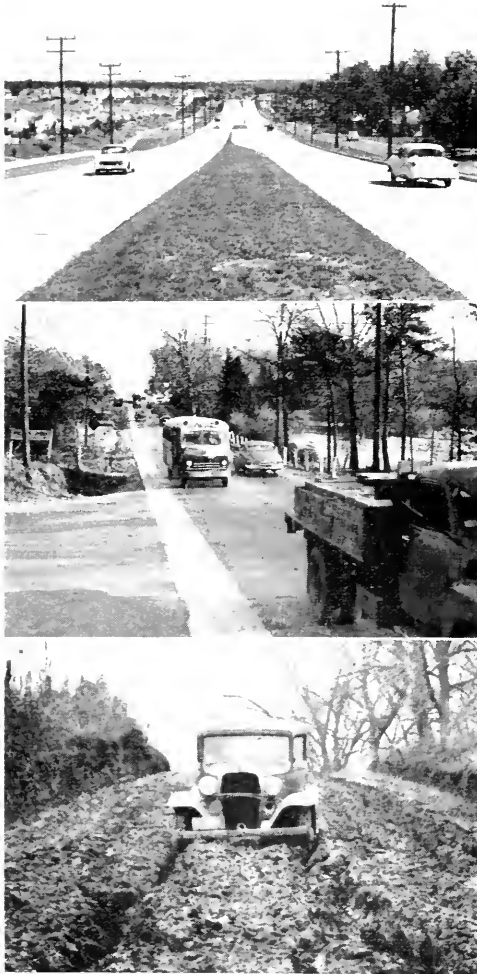
Built or now under construction as dualized tie-ins between these radial roads are such heavily-traveled thoroughfares as Viers Mill Road, University Boulevard and the Circumferential itself, construction of which will be accelerated under the federal interstate program.

FIFTY-TWO MILES OF DIVIDED HIGHWAY IN BALTIMORE COUNTY

In the Baltimore area steady progress is being made to widen and improve the traffic-packed roads serving the City and its fast-growing suburbs.

Of the 319 miles of state roads in Baltimore County, 52 miles have been dualized and others are under construction as modern duals. Chief among these from a traffic point of view is the Baltimore Beltway, in use from Falls Road east to Dulaney Valley Road and now complete to an extension of Loch Raven Boulevard.

Charles Street, which from the earliest beginnings has been Baltimore's principal thoroughfare, was extended in 1958 to join the Beltway. Traveling on relocation in its northern reaches and running far under Joppa Road, this handsome dual highway funnels



Viers Mill Road, upper photo, was dualized in 1956. The middle picture shows it in 1946, widened by concrete shoulders. The lower photo shows the same road in 1936.

traffic from the Harrisburg Expressway and the Beltway into downtown Baltimore.

The Harrisburg Expressway itself is under contract as a complete dual facility with full control of access from the Baltimore Beltway north to the Mason-Dixon line where it will meet an already-completed Pennsylvania section running to the York bypass, now under construction. This highway is a federal interstate project and is being financed under the 90-10 formula.

All but four miles of Maryland's part of this expressway is open and that four miles will be finished in 1959.

In the southwestern Baltimore area a new six-mile section of the Beltway was completed in 1958 from U. S. 40 to the Baltimore-Washington Expressway. This new Beltway connection removes a substantial amount of through east-west traffic from Baltimore's streets by shunting it through the Harbor Tunnel, thus facilitating interstate travel while easing local congestion.

Other projects are humming in all sections of the State as the revised Twelve-Year Program advances. Chief Engineer Pritchett reported that at the end of the fiscal year 1958 contracts over the last two years had been awarded for building or rebuilding 903 miles, with contracts for 43 additional miles advertised but not awarded as of mid-1958.

LEVELING THE MOUNTAIN TOPS

Two of the most conspicuous recent road improvements were the relocation of U. S. 40 over Martin and Polish Mountains, considered the toughest and most forbidding passages of Maryland's part of this trans-continental highway. The Martin Mountain improvements were completed in 1957. The Polish Mountain project, opened in 1958, contained the deepest cuts and largest fills ever engineered in the State.

HAGERSTOWN—FIRST INTERSTATE PROJECT

The first interstate highway started in Maryland under the federal act of 1956 was completed late in 1958. It is the section of U. S. 11 running from U. S. 40, west of Hagerstown, north to the Pennsylvania line.

Built to the high federal standards of access only at traffic interchanges and beautifully landscaped, this new dual facility bypasses the busy streets of Hagerstown as well as the big plant of the Fairchild Aircraft Company.

A second section of U. S. 11 is in the planning stage and will run south from U. S. 40 to Williamsport and across the Potomac on a new bridge,



The Polish Mountain relocation on U. S. 40, opened in 1958. The inset shows the road it supplanted—the old Bank Road built 140 year earlier.

near the Evan Watkins' Ferry of General Braddock's time. Pending construction of this southern leg and a U. S. 40 interchange, the northern section joins U. S. 40 at grade.

Another bypass of Hagerstown's congested thoroughfares is on the drawing boards and scheduled for early construction. It is a relocation of U. S. 40 around the southern suburbs of the city. Also a part of the federal interstate system, this new highway will run from the Pennsylvania line north of Hancock, eastward to the Frederick Bypass. Its east-west portion was completed as a through-traffic artery late in 1958.

FINISHING TOUCHES ON FREDERICK BYPASS

This bypass, begun in 1954 and completed in 1958, was constructed to interstate standards before passage of the 1956 federal act. It surrounds Frederick on three sides and affords easy access to such important highways as U. S. 15, U. S. 240, U. S. 340 and U. S. 40. It is another example of Maryland enterprise in starting the interstate system before the availability of federal ninety-percent money.

OTHER PROJECTS

Many other projects in the State were completed, under construction or in the advanced planning stage at the close of 1958.

One of the most important was the Blue Star Memorial Highway across the Eastern Shore. The final section was opened in 1956. This controlled-access highway connects the eastern terminus of the Chesapeake Bay Bridge with the Delaware state line at Warwick, in Cecil County and leads to the Delaware Memorial Bridge. At present it is dualized as far east as Queenstown and from there to Warwick the road consists of one lane of an ultimate divided highway. It has been designated State Route 71.

Two town bypasses were opened on the same day in 1957: the Rising Sun bypass, a relocation of a section of U. S. 1 in Cecil County; and a north-south bypass of Berlin, in Worcester County, a relocation of U. S. 113. Today an east-west bypass of Berlin is under construction as part of the dualization of U. S. 50.

Acquisition of rights of way, preliminary engineering work and actual construction continued in 1958 on three of the State's great throughways, at Cumberland, Hagerstown and Salisbury.

The Crisfield Boulevard (State Route 413) was completed in 1958, furnishing that seafood center a principal divided highway. The Princess Anne bypass is under construction and work is progressing on a Pocomoke bypass, both projects being part of the dualization of Maryland's entire length of U. S. 13 from the Delaware line at Delmar to the Virginia state boundary.

The final dualization of U. S. 301 continues at a fast pace from the new Glen Burnie bypass south to the Potomac River Bridge at Morgantown. The improvement of U. S. 301 is of major importance since it gathers up southbound traffic from both the Baltimore Tunnel Thruway and the Chesapeake Bay Bridge. The sections not already dualized are all under contract.

NORTHEASTERN EXPRESSWAY

A new U. S. 40 east of Baltimore is one of the most urgent projects of the immediate future. The present Pulaski Highway, built in the thirties as Maryland's first dual facility, has become entirely inadequate for the traffic it carries—the heaviest in the State on the section near Baltimore.

Roadside establishments populate its margin since it was built before the advent of access control.

The 1955 Legislature authorized construction of a new and modern expressway as a toll facility. However, the following year Congress passed the Interstate Highway Act providing ninety percent financing for this highway which is part of Maryland's 350 miles on the interstate



Dualization of U. S. 301 in Southern Maryland is progressing. This is a completed section in Charles County. The inset shows a section of the old road where one slow-moving vehicle could hold up a line of cars.

system. The road will be built under the federal program and consequently will be free of tolls, as are all the new roads constructed on the interstate system.

It will run from the Baltimore City line to Delaware where it will connect with a new expressway to carry traffic directly to the Delaware Memorial Bridge. These two highways will forge the last link in a continuous expressway system from the New England states to Washington.

The first section from the Baltimore City line to the Baltimore County Beltway has been advertised and construction will be under way early in 1959. To be known as the Northeastern Expressway, this new Maryland road will be north of and parallel to present U. S. 40.

NEW ADVISORY GROUP

In 1956 Governor McKeldin appointed a new body of citizens to confer with and advise the Roads Commission in the progress of its long-range building program.

Known as the Program Review Committee, this group is composed of Francis V. du Pont, a resident of Dorchester County, former Chairman of the Delaware State Highway Department and once Commissioner of

the federal Bureau of Public Roads; Dr. Abel Wolman of Baltimore, Johns Hopkins engineer, who has served on several other Roads Commission advisory boards over the past twenty years; William Purnell Hall, president of the Maryland Shipbuilding Corporation and a resident of Baltimore County; Ellsworth R. Roulette, Washington County lawyer; and two retired business executives: Donaldson Brown of Cecil County and Herbert Ryerson of Charles County. Mr. Ryerson has since resigned from the Committee.

THE SUFFICIENCY RATINGS

In preparation for its report to the 1958 session of the General Assembly, the Roads Commission launched in 1957 an exhaustive study of the actual condition of the roads system.

As originally laid out in 1909 this system connected the county seats with each other and with Baltimore.² It measured 1,300 miles. A network of secondary roads, built in the twenties, brought the 1930 mileage to 3,200.³

Following the slow-down of the depression and war years, a road-building spurt in the past decade brought the 1958 roads system to 4,707 miles.

ROADS RATED LIKE SCHOOL MARKS

Every part of this system was given a mile-by-mile check in the 1957 survey.⁴ The results were computed in what the engineers call a "sufficiency rating," similar to the old-fashioned markings in the public school system, from zero to one hundred.

Any road rated 60 or under was deemed in need of improvement. Roads achieving grades of between 60 and 70 required "careful watching." Stretches rated 70 to 100 were in the category of "fair to excellent."

MARYLAND RATES 65 IN GREEN BOOK

After every mile was studied and rated an average was struck for the State system as a whole. It was found that the Maryland roads system rated a mark of 65—"careful watching."

The results of this test were incorporated, together with maps showing the county ratings in detail, into a volume known as the "Green Book." It augmented the "Yellow Book" of 1953 which had been the basis of legislative action on the Twelve-Year Program.

² SRC 1908-12, page 12.

³ SRC 1927-30, page 20.

⁴ SRC 1957-58, page 2.

However, there was an important difference. The new study embraced all mileage in the state system and was not confined to the 3,159 miles scheduled for improvement in the Twelve-Year Program. Thus many miles deemed adequate in 1953 were found wanting in 1957 and were so reported to the Legislature.

NEW AND HIGHER COST ESTIMATES

On completion of the survey, estimates were prepared which reflected current construction and right of way costs for projects in the remaining part of the Program—inevitably a big jump in view of the constant rise in the price index.

HIGHWAY RESEARCH

One of the most important if least publicized units of any large organization is its research division. In modern highway practice this field includes not only development of adequate design standards but also keeping abreast of the new and ever-changing techniques of highway engineering, a big order in this age of electronics.

The Roads Commission's research division operates on a modest budget under Research Engineer Allan Lee.

One of the interesting investigations currently under way is designed to eliminate the interminable ack-ack sounds caused by closely-placed transverse joints in concrete pavement. All motorists are familiar with this slight noise and take it for granted as a necessary part of highway travel. However, this minor nuisance soon may be a thing of the past.

Definite progress is being made in developing continuously reinforced pavements for long stretches, doing away with the great majority of these joints. The main objective of this investigation, however, is to simplify construction techniques and reduce maintenance costs. This study is a part of a joint research program conducted with the University of Maryland and Lehigh University.

Another project under the same program is the control of erosion on roadside slopes, designed to prevent the unsightly and costly washouts on highway embankments following heavy rains.

Also under way in cooperation with the University is a three-year engineering training course for Commission personnel. Including general engineering fundamentals in the highway field, this program allows promotional credits to employees who successfully complete it. It also provides them with full reimbursement of tuition fees if they complete the course while in the Commission's employ. The first class got its certificate in 1958.

A series of research projects conducted by the Johns Hopkins University in cooperation with the Commission and completed in 1956 investigated, among others, such varied subjects as swamp drainage, efficiency of roadside guard rails and proper functioning of pipe culverts. Hopkins researchers and the Roads Commission also published a report—unique in its field—on the design of storm water inlets which the Commission heralded as filling “a long-felt need.”⁵

CAPITAL IMPROVEMENTS

Another new development is the formation of a capital improvement program for the construction of new State Roads Commission buildings and the improvement of old ones.

The Commission has seven district offices, 44 garages and miscellaneous other buildings scattered throughout the State. In addition, it owns buildings in Baltimore, including a garage on Southern Avenue, in the Hamilton section. A few of these buildings are new and modern; many of them are old and very inadequate.

The Commission in 1957 launched a program to develop standard plans for district offices, shops and garages which can be adapted for use in all parts of the State, reducing costs of replacements. The first garage to be built under the new system is now under construction at Snow Hill. The first District office building, at Frederick, was advertised for bids in 1958.

NEW QUARTERS

For the first fifty years the Roads Commission occupied space in a succession of downtown office buildings in Baltimore.

Starting in the Union Trust Building, it also rented quarters in the Garrett Building and later in the Federal Reserve Bank Building.

In 1942 it purchased for \$182,679 the Chesapeake Potomac Telephone Company building at 108 East Lexington Street which has been its headquarters for sixteen years. In the past three years extensive alterations costing \$109,988 have been made in an effort to modernize the building and increase its floor space.

In the meantime headquarters needs have far outgrown the structure and many departments are housed in parts of three other office buildings scattered about the downtown section.

Beginning with the second half-century in 1959, the Baltimore personnel, except for the staff at the Laboratory, once again will be under one roof.

⁵ SRC 1953-54, page 261; SRC 1955-56, page 249.

A six-story State Roads Commission building, providing 83,000 square feet of floor space, has been constructed in the Hoffman Street-Fifth Regiment Armory area as part of a State Office Building center. A much larger building to house most of the other state departments is under construction nearby.

Meanwhile the building on Lexington Street is scheduled to be retained by the State to house agencies that will not move to the new area.

NEW REAL ESTATE DEPARTMENT

One of the byproducts of the highway construction program is the incidental acquisition of excess property taken in right of way negotiations.

Some of this land is unimproved while some parcels contain houses or other buildings. In many cases these have potential value for rental and eventual sale. Other property taken for highway construction contains buildings that either must be demolished or, where possible, sold and moved intact to another location.

While the Roads Commission is not and definitely does not want to be in the real estate business, it has the duty to dispose of this property in the State's best interest.

To this end it established in 1957 a real estate section which this year was expanded into a department. Its function is the management of all rental properties and the custody and disposition of excess land acquired by the Commission. The department now has jurisdiction over more than 1,000 pieces of property, of which some 400 are improved by buildings. Administrator of the new unit is Carl E. Wyant, Jr., who formerly was an assistant Right of Way Engineer. He is assisted by Robert S. Bennett, Property Agent.

A committee of private citizens, headed by S. Page Nelson, president of the Savings Bank of Baltimore, has been appointed to consult with and advise the new department. Other members of the Committee are: Mr. John E. Weyer, Mr. Burton Guy, Mr. Walter C. Pinkard, Mr. John A. Magee, Mr. E. Randolph Wootton and Mr. Guy T. O. Hollyday.

MODERNIZING RIGHT OF WAY PROCEDURES

During the past year the Right of Way Division has been decentralized in an effort to streamline its operations and to bring right of way engineers more closely in touch with conditions in the areas they serve.

Before 1957 all acquisition of property was handled by six assistant right of way engineers centered in Baltimore. In the interest of efficiency

the Roads Commission last year shifted the field operations to a district level.

The right of way department now maintains an office in each of the Commission's seven districts under a resident District Right of Way Engineer who reports to the Chief Right of Way Engineer in Baltimore, LeRoy C. Moser.

In announcing the new program in the fall of 1957 Chairman Bonnell pointed out the expediency of the move and the fact that it would save the State a considerable sum of money in travel costs. He said the resident right of way engineers will be able to "get the feel" of the communities in which they live and "will acquire an intimate knowledge of the direction of growth, the local real estate market, property values and sales. It also should improve our public relations in the right of way field."

No branch of Roads Commission activities has felt the strain of expansion more keenly than the right of way department whose expenditure for needed land has increased from about \$2 million a year before the Twelve-Year Program to an average of more than \$12 million during the past four years.

LAND OWNERS ONCE GAVE PROPERTY FOR ROADS

No other part of a highway program so intimately touches so many people as negotiating for rights of way. In the last four fiscal years, some 9,700 separate pieces of property in all sections of the State have been acquired, for which the Commission paid an average of a little over \$5,000 per parcel.

The payment of substantial sums of money to citizens for putting a road through their properties is a relatively new wrinkle in highway construction.

In 1821 engineers surveyed several different routes for the Boonsboro-Hagerstown Turnpike. Property owners on each route competed against each other for the privilege of giving their land to the turnpike company.⁶

It was considered not only a matter of prestige but an enhancement of property value for a public road to run through a man's land.

In the early days of the Roads Commission very little money was paid for rights of way. Sometimes the district engineers, who handled all such matters, would pay as little as a dollar as legal consideration for a deed to the needed land. The people were eager for the new hard-surfaced roads and wanted them as close to their homes as possible.

⁶ Williams, History of Washington County (1906), Vol. I, page 152.

In 1915 a one-man right of way section was created under Frank H. Zouck, then assistant chairman. There was so little work to do that the section was abandoned the next year and the duty of obtaining the land returned entirely to the districts.

The Crain Highway (now U. S. 301), the first modern road built on new location and running 33 miles through Southern Maryland, was planned and financed in 1922 without any appropriation at all for rights of way. John Mackall, who was then Chairman, said: "If it is not sufficiently advantageous for the property owners to give us the rights of way, we had better not build the road."

DEPARTMENT STARTED WITH ONE MAN

The present Right of Way Department dates from 1930. It consisted of one man, LeRoy W. Kern, whose duty it was to take over negotiations with the owners when the property could not be secured "at reasonable prices by the District Engineers."⁷ In 1932 six right of way examiners were working out of Baltimore but by 1935 the field forces were reduced to one man and most of the work had been turned back to the districts.

In 1936 the department was reorganized. The concentration of work in Baltimore as well as a marked increase in right of way claims dates from that time. About 500 parcels of land were being purchased annually.

Kern remained as head of the unit until 1951 when he retired and his place was taken by LeRoy Moser, one of his assistants.

Sometime between the mid-twenties and the mid-thirties the public attitude towards road rights of way underwent a noticeable change. From an early eagerness to give land in exchange for the roads, there developed a more cautious approach on the part of many land owners.

The high cost of procuring rights of way today has added many millions to the price the people pay for good roads, money that otherwise could go into building more mileage at a faster pace.

\$79 MILLION NEEDED FOR INTERSTATE SYSTEM

One of the major projects of the right of way department is the preparation of detailed cost estimates for purchase of the land needed in Maryland's 350 miles of the federal interstate system.

At 1958 prices the conclusions are that these rights of way will total approximately \$79 million, exclusive of Baltimore City where the Jones

⁷ SRC 1927-30, page 99.

Falls Expressway and an east-west expressway will be built under the federal interstate system.

BUYING PROPERTY FOR FUTURE NEEDS

One of the most important functions of the right of way department is the purchase of land needed for long range expansion of the highway system.

The history of the Roads Commission is replete with instances where failure to buy property at the time when it was available and cheap has greatly multiplied the later cost. In some instances this lack of foresight has made needed widening prohibitive, as in the case of the Washington Boulevard. Here a whole new expressway on new location has been found necessary within a mere 25 years because of initial failure to acquire sufficient right of way.

Modern highway planning keeps a careful eye on the needs of the future, especially in sections of the State where heavy build-up is indicated for the years ahead. This policy is noted in the 1958 report of the Roads Commission where it is said: "The continuing spread of urban areas and the accompanying increase in land values make it imperative that the attempt be made to acquire as many properties as possible that will be needed for future programs before certain areas are so heavily built up as to make future roadway expansions economically prohibitive in these sections."

The wisdom of such a policy is obvious in view of many past experiences. It is also obvious that great care must be taken, based on the most reliable forecasts available, to make certain that the land purchased today actually will be needed in the foreseeable future.

ROAD SYSTEM'S BOOK VALUE

At June 30, 1958, the book value of the State Highway System, plus the cost of construction in progress was:	\$679,580,883
This figure includes all bridges except toll facilities. The investment in toll facilities operated and administered under the terms of the Trust Agreement dated October 1, 1954, aggregated on June 30, 1958: -----	189,243,531
Service facilities of the Commission include land, buildings and equipment used by the districts and divisions. Their book value on June 30, 1958 was:---	10,896,855
	\$879,721,319

DEVELOPING THE MARYLAND OF TOMORROW

The tremendous scope of the future highway system in the State and its impact on the building industry is underscored by the creation of another new unit within the Roads Commission known as the development engineering division.

Established in 1957 by Chief Engineer Pritchett, its purpose is to coordinate state highway planning with local planning agencies and land developers.

Since World War II Maryland has witnessed its greatest surge of homebuilding, the majority of which has been concentrated in the great metropolitan suburban centers surrounding Baltimore and Washington.

Most of this new housing has been built by real estate developers who have taken whole tracts or subdivisions and converted them into pleasant living areas. The metamorphosis of green pastures into suburban home sites and shopping centers, each requiring all the usual services of water, utilities and roads, has given local governmental bodies their greatest postwar problem.

On the state level it is necessary for the Roads Commission to plan expressway service that will do the most good for the greatest number and the least damage to existing built-up properties.

Examples already planned and under construction are the Baltimore Beltway and the Washington Circumferential, both of which slice through new and old developments and furnish suburbanites easy access to the radials running into the two cities.

Other state highway facilities will be built in the future while present routes will be widened and improved. It is toward this Maryland of tomorrow that the new development division directs its activities.

For instance, it reviews all building and zoning applications submitted to county authorities for possible conflict with Roads Commission plans in the locality.

It works closely with county and regional planning commissions and coordinates their plans with such Commission departments as location and right of way.

In its first year the division already has proved its usefulness by securing dedication or reservation of areas required for future Roads Commission construction, denial of rezoning in areas of future improvement, and the relocation of proposed structures to avoid conflict with planned highways.

Such activity serves both the State and the property owner and saves untold dollars in future right of way costs.

At present the work of the division is confined to the six counties in the metropolitan areas of Baltimore and Washington. Its head is C. Stuart Linville, with the title of Development Engineer. He formerly was Assistant Engineer for Location and Planning in the Commission's third district, comprising Montgomery and Prince George's counties.

In a modern highway department, planning for the future ranks closely in importance with prosecution of the great building programs of the present.



Ushering in its second half-century the Roads Commission occupies this new building in 1959.

CONCLUSION

THE ROAD AHEAD

In this age of electronics, satellites and shots at the moon, one would be rash indeed to predict the types of vehicles or the design of the roads in the next fifty years.

Some foresee a more general use of aircraft for the longer trips and helicopters for the shorter ones, thus lessening our dependence on roads.

On the other hand, a group of editors recently made these predictions for the year 2000: Expressways not only will multiply but will be double-decked with built-in heating devices to keep off ice and snow. Duplicate sets of such roads will appear—one for pleasure cars and the other for business vehicles. Cities will be free of above-ground traffic. Workers will use fast transit lines below the surface to get about the city and out to the clusters of spacious and efficient homes which will replace today's suburbs.¹

Others predict accident-proof cars—vehicles equipped with radar devices that will stop them before a collision occurs. And some foresee a future requiring neither roads nor cars. Transportation, they say, will be by nuclear-powered wings, on the order of those used by Icarus but with far superior qualities.

THE FUTURE IN MARYLAND

Highway engineers are neither prophets nor the sons of prophets. Until a more reliable method has been perfected, they continue to forecast the future from the facts of the present and the past.

They note, for instance, that pack-horse trails in early Maryland had to be widened to accommodate the new carts which began to appear.

¹ Editors of certain architectural engineering and construction magazines painted a composite picture of the America of the year 2000 which they sealed in the cornerstone of the new Washington headquarters building of the Associated General Contractors of America. The stone is to be opened at the dawn of the Twenty-first Century. *Baltimore Sun*, June 7, 1958.

Later, toll roads were built by private capital so that coach passengers could purchase a few miles of smooth travel. The infant auto created a demand for a state-wide system of roads and a state highway commission to build and administer it.

The first state road system of 1,300 miles was completed in 1915. It now measures some 4,700 miles. When Maryland's first Commissioner of Motor Vehicles was appointed in 1910, he registered 4,500 cars that year. In fiscal 1958, motor vehicle registration in the State had exceeded a million vehicles.

Today there are 200 times as many cars and trucks using less than four times as much state road mileage as there was in 1915. The roads have been widened and improved to handle this great traffic increase. But they are still inadequate for the demands.

Nationwide, there are today some 75 million motor vehicles on the roads with 100 million expected by 1975. Based on past experience and current population trends, traffic engineers forecast highway use twenty years ahead.

In Maryland, because of priority scheduling and the impetus of the federal Interstate Highway Act of 1956, the immediate future is clearly foreseeable. The program and planning already started should continue on not less than the present scale. Otherwise, the State will be engulfed in the flood of ever-increasing traffic.

NEW ADMINISTRATION COMING UP

As 1958 closes, a new governor and a new legislature stand ready to take over the affairs of state and the prosecution of the roads program. Governor-elect J. Millard Tawes will be the ninth executive responsible for a state roads system. His burden will be no lighter than that of Governor Crothers who started the system in 1908.

COSTS STILL UP

If the past is a portent of the future, road-building costs will continue to rise. But the principal concern of the people must not be the high cost of good roads but the cost to the economy of bad ones.

LET'S GO

The road ahead is plainly marked. The "good roads movement" of fifty years ago started something that is gaining momentum with each passing year.

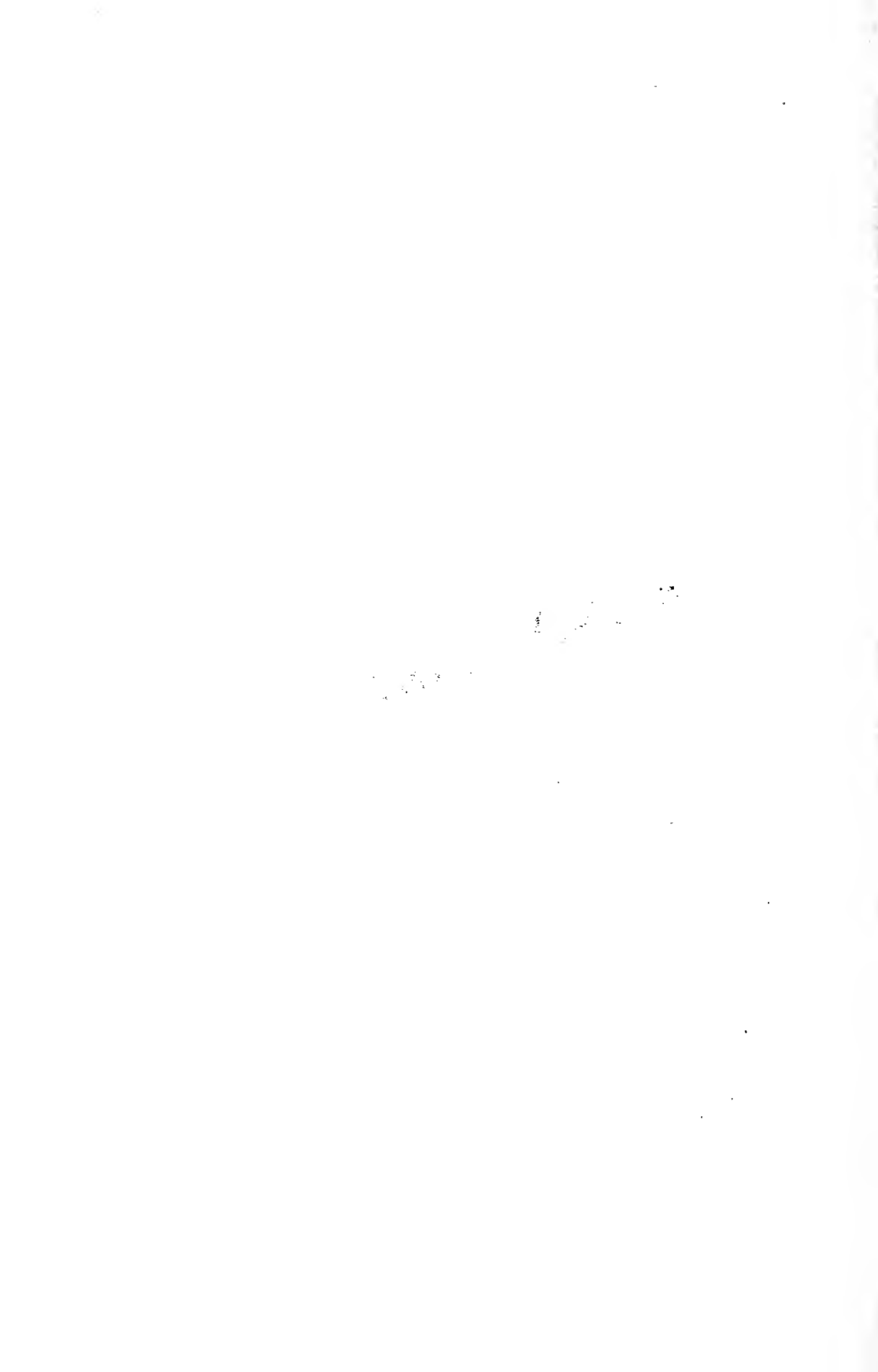
The sign on the road ahead says GO.

DO NOT REPRODUCE

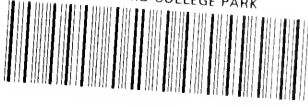
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